

**TITLE 20 ENVIRONMENTAL PROTECTION**  
**CHAPTER 7 WASTE WATER AND WATER SUPPLY FACILITIES**  
**PART 3 LIQUID WASTE TREATMENT AND DISPOSAL**

**20.7.3.1 ISSUING AGENCY:** New Mexico Environmental Improvement Board.  
[10/15/97; 20.7.3.1 NMAC - Rn, 20 NMAC 7.3.I.101, 3/1/04]

**20.7.3.2 SCOPE:**

A. This Part, 20.7.3 NMAC, applies to on-site liquid waste systems that are designed to receive and do receive two thousand (2,000) gallons or less of liquid waste per day, and that do not generate discharges that require a discharge plan pursuant to 20.6.2 NMAC or a national pollutant discharge elimination system (NPDES) permit.

B. Sections 305 and 307 [now 20.7.3.305 - 307 NMAC] apply to the disposal of on-site septage and holding tank wastes.  
[10/15/97; 20.7.3.2 NMAC - Rn, 20 NMAC 7.3.I.102, 3/1/04]

**20.7.3.3 STATUTORY AUTHORITY:** NMSA 1978, Sections 74-1-6, 74-1-7(A)(3), 74-1-8(A)(3), and 74-1-9(Repl. Pamph 1993 and Cum. Supp. 1997).  
[10/15/97; 20.7.3.3 NMAC - Rn, 20 NMAC 7.3.I.103, 3/1/04]

**20.7.3.4 DURATION:** Permanent.  
[10/15/97; 20.7.3.4 NMAC - Rn, 20 NMAC 7.3.I.104, 3/1/04]

**20.7.3.5 EFFECTIVE DATE:** October 15, 1997, except where a later effective date is indicated in the history note at the end of a section.  
[10/15/97; 20.7.3.5 NMAC - Rn, 20 NMAC 7.3.I.105, 3/1/04 & A, 3/1/04]

**20.7.3.6 OBJECTIVE:** To protect the health and welfare of present and future citizens of New Mexico by providing for the prevention and abatement of public health hazards and surface and ground water contamination from on-site liquid waste disposal practices.  
[10/15/97; 20.7.3.6 NMAC - Rn, 20 NMAC 7.3.I.106, 3/1/04]

**20.7.3.7 DEFINITIONS:** As used in 20.7.3 NMAC:

A. Terms starting with the letter 'A' are defined as follows:

(1) "absorption area" means the area in square feet of infiltrative surface in a soil disposal system designated to receive effluent from a treatment unit;

~~[A. "aerobic treatment system" means any treatment system which stabilizes liquid waste through the addition of supplemental air or dissolved oxygen by means of mechanical or diffused aeration. Dissolved oxygen content must be maintained at a minimum of 2.0 mg/L for a system to be considered an aerobic system;]~~

~~[B.](2) "advanced treatment" [or "tertiary treatment"] means any process [of water renovation that upgrades liquid waste to meet specific reuse requirements. Advanced treatment may include general cleanup of wastewater or removal of specific types of wastes, such as nitrates or other nitrogen compounds, insufficiently removed by primary or secondary treatment processes] of wastewater treatment that removes a greater amount of contaminants than is accomplished through primary treatment. Advanced treatment may include physical or chemical [treatments] processes;~~

(3) "aggregate" means clean washed gravel (no greater than 4% fines by weight), clean crushed rock or other media approved by the department. "Aggregate" shall have a minimum size of ¾ inch and a maximum size of 2 ½ inches and provide no less than 35% void space under field conditions. The aggregate shall be durable, inert, and shall have a hardness value of 3 or more on the Moh's scale of hardness so it will maintain its integrity, not collapse or disintegrate with time, and not be detrimental to the performance of the system;

~~[C. "alternative system" means any on-site liquid waste system utilizing a method of liquid waste treatment and disposal that is not recognized and allowed by 20.7.3 NMAC or by the New Mexico Design Standards;]~~

(4) "alternative disposal" means any approved on-site liquid waste disposal method used in lieu of, including modifications to, a conventional disposal method. These include but are not limited to, mounds, evapotranspiration beds, pressure dosing systems, and surface irrigation systems;

(5) "amendment of permit" means any of the following changes to an existing permit:

(a) to reflect changes in the size or boundaries of a lot with an existing on-site liquid waste system;

(b) to reflect changes in site conditions;

(c) to reflect changes in the permit conditions; but,

(d) amending an existing permit or alteration of an existing permit is not required to reflect change in ownership of the system or lot, unless such change materially affects the operation of the system, such as where operating agreements exist for cluster systems; and,

(e) does not mean "modify" as defined in this section;

[D.] "anaerobic treatment" means a biological process through which organic material is decomposed in an environment containing no dissolved oxygen;

[E.](6) "approved" means materials, products, or procedures that [meet the requirements of the New Mexico Design Standards;] have been reviewed and given acceptance for use by the department;

(7) "area of concern (AOC)" means a geographical area with sufficient geological or biological characteristics that may require increased protection of groundwater and surface water. These areas may include but are not limited to:

(a) a water-table aquifer (includes both unconfined and semi-confined conditions) with a vadose zone thickness of 100 feet or less containing no soil or rock formation that would act as a barrier to saturated or unsaturated wastewater flow;

(b) an aquifer with known anthropogenic anoxic or nitrate contamination;

(c) an aquifer overlain by fractured bedrock;

(d) an aquifer in karst terrain; and,

(e) a gaining stream known to be impacted by nutrients from liquid waste systems; and

[F.](8) "arroyo" means a dry wash or draw [which]that flows [only] occasionally, a watercourse (as a creek or stream) in an arid region, or a water carved gully or channel[;].

B. Terms starting with the letter 'B' are defined as follows:

[G.](1) "bedrock" means the more or less solid, undisturbed rock in place either at the surface or beneath surficial deposits of gravel, sand or soil, or a consolidated rock formation of impervious material which may exhibit jointed, fractured, or deteriorated characteristics, or the R horizon of a soil profile;

[H.](2) "bedroom" means any room or unfinished area within a [dwelling] building that is designated or might reasonably [might] be used [pursuant to the New Mexico Building Code] as a sleeping room pursuant to the responsible building permitting authority or manufactured housing authority;

[I.](3) "biochemical oxygen demand" or "BOD" means the rate at which organisms use the oxygen in water or wastewater while stabilizing decomposable organic matter under aerobic conditions;

[J.](4) "blackwater" means waste from a liquid flushing toilet, urinal, kitchen sinks, dishwashers or laundry water from the washing of material soiled with human excreta, such as diapers[;].

[K.](5) "body of water" means all constrained water including water situated wholly or partly within or bordering upon New Mexico, whether surface or subsurface, public or private;

[L.](6) "building drain" means that part of the lowest piping of a drainage system which receives the collective liquid waste discharge from soil, waste and other drainage piping inside a building and conveys it to the building sewer which begins two (2.0) feet outside the vertical plane of the building wall, residential or commercial unit; and,

[M.](7) "building sewer" means that part of the horizontal piping of a drainage system which extends from the end of the building drain located two (2.0) feet outside the building wall and which receives the liquid waste discharge from the building drain and conveys it to a liquid waste treatment unit or approved point of disposal[;].

C. Terms starting with the letter 'C' are defined as follows:

[N.](1) "canal" means a man-made ditch or channel that carries water for purposes other than domestic consumption;

[O.](2) "cesspool" means an excavation or non-water tight unit which receives untreated water-carried liquid waste allowing direct discharge to the soil;

(3) "clay" means:

(a) a soil separate consisting of particles .002 millimeters in diameter; or,

(b) the textural class name of any soil that contains 40% or more clay, less than 45% sand, and less than 30% silt;

~~[P-](4)~~ "clearance" means the vertical thickness of suitable soil between the lowest point of a liquid waste disposal system and the seasonal high ground water table, bedrock, or other limiting layer;

~~(5)~~ "cluster system" means a wastewater system that serves more than one unit and treats 2000 gallons per day or less of wastewater;

~~(6)~~ "coarse sand" means soil comprised of 25% or more of soil particles 0.5 to 2.0 mm in diameter and less than 50% of any other grade of sand;

~~(7)~~ "commercial liquid waste" means wastewater, whether treated or untreated, that exceeds 300 mg/l BOD, 300 mg/l TSS, 80 mg/l total nitrogen, or 105 mg/l fats, oils and grease;

~~[Q-](8)~~ "commercial unit" means a structure [without bedrooms but with sinks, baths, showers, toilets, urinals, floor drains for receiving liquid waste] that is not a residential unit but which has sewage producing fixtures such as sinks, baths, showers, toilets, urinals, dish- and clothes-washers, or floor drains for receiving liquid waste including but not limited to uses included in Table 3, Section 24;

~~(9)~~ "conventional disposal" means a subsurface soil absorption system with gravity distribution of the effluent, with or without a lift station, constructed in accordance with the standards set forth in this regulation, including trench or bed absorption areas and seepage pits;

~~(10)~~ "conventional treatment" means a septic tank where primary treatment occurs; and,

~~(11)~~ "conventional treatment system" means an on-site liquid waste utilizing both conventional treatment and conventional disposal and includes privies, holding tanks and vaults.

D. Terms starting with the letter 'D' are defined as follows:

~~[R-](1)~~ "degrade a body of water" means to reduce the physical, chemical or biological qualities of a body of water and includes, but is not limited to, the release of material which could result in the exceeding of standards established by 20.6.4 NMAC, Standards for Interstate and Intrastate Streams, by 20.6.2 NMAC, Ground and Surface Water Protection, and by 20.7.10 NMAC, Drinking Water;

~~[S-](2)~~ "department" means the New Mexico environment department;

~~[T-](3)~~ "design flow" means the flow rate for which an on-site liquid waste system must be designed in order to assure acceptable system performance, assuming the use of conventional plumbing fixtures[-];

~~(4)~~ For residential sources, the design flow shall be calculated assuming two (2) persons per bedroom for the first two (2) bedrooms and one (1) person per additional bedroom in a single family dwelling unit, and seventy five (75) gallons per person per day. Multiple family dwelling unit source design flows shall be calculated as the sum of design flows for each single family unit included.

~~(2)~~ Design flows for nonresidential sources shall be based on Table 402.2 and generally accepted references (such as the Uniform Plumbing Code or the USEPA Design Manual: On site Wastewater Treatment and Disposal Systems). Design flows for nonresidential sources also may be based on professional engineering or professional design calculations, if more restrictive, or measured flows. Design flows for nonresidential sources shall include a safety factor of 1.5 to account for peak flows;

~~[U-](4)~~ "disinfected" or "disinfection" means the use of any process designed to effectively kill most micro-organisms contained in liquid waste effluent including essentially all pathogenic (disease causing) [bacteria-] organisms, as indicated by the reduction of the fecal coliform concentration to a specific level. These processes include but are not limited to, suitable oxidizing agents such as chlorine, ozone and ultraviolet light;

~~[V-](5)~~ "disposal system" means a generally recognized system for disposing of the discharge from a liquid waste treatment unit and includes, but is not limited to, seepage pits, drainfields, evapotranspiration systems, sand mounds, [sand filters] irrigation systems, and approved surface applications;

~~(6)~~ "domestic liquid waste" means wastewater that does not exceed 300 mg/l BOD, 300 mg/l TSS, 80 mg/l total nitrogen, or 105 mg/l fats, oils, and grease; and,

~~(7)~~ "drainage ditch" means an unlined trench dug for the purpose of draining water from the land or for transporting water for use on the land.

~~[W-]~~ "dwelling" or "dwelling unit" means a structure which contains bedrooms;

E. Terms starting with the letter 'E' are defined as follows:

~~[X-](1)~~ "edge of a watercourse, canal or arroyo" means that point of maximum curvature at the upper edge of a definite bank or, if no definite bank exists, the highest point where signs of seasonal high water flow exist;

~~[Y-](2)~~ "effluent" means [treated liquid waste] the discharge from the final treatment unit;

~~[Z-](3)~~ "effluent disposal well" means a drilled, driven, or bored shaft or dug hole with depth greater than any surface dimension, used for subsurface emplacement of liquid waste, including, but not limited to,

abandoned water supply wells, irrigation wells, and test holes, but excluding seepage pits used as disposal systems, which conform to the standards in 20.7.3 NMAC;

~~[AA-]~~(4) "enclosed system" means a watertight on-site liquid waste system which does not discharge to the soil, including, but not limited to, holding tanks and lined evapotranspiration systems;

~~[AB-]~~(5) "established on-site liquid waste system" means an on-site liquid waste system which has been in active ~~[and trouble free]~~ use at any time during the ten (10) years prior to submission of a permit application, and in compliance with any liquid waste disposal regulation in effect at the time of installation, excluding the permitting or registration process, but does not include cesspools;

~~[AC-]~~(6) "evapotranspiration system" means a disposal system designed to dispose of ~~[all the design flow from a liquid waste treatment unit]~~ the effluent through evaporation and plant uptake and transpiration; and,

(7) "experimental system" may also be referred to as "innovative technology" means without limitation, any on-site liquid waste system utilizing a method of liquid waste treatment technology, processes, equipment or components which are not fully proven in the circumstances of their intended use, but, based upon documented research and demonstration, appear to offer benefits which outweigh the potential risks of failure, or a method of disposal that is not currently approved by the department. Experimental systems shall be submitted for review to the wastewater technical advisory committee (WTAC) who shall either recommend the system for full approval, recommend approval with conditions, or reject the proposed system. Final approval of experimental systems shall be at the discretion of the secretary. Experimental systems must be significantly different from technology currently approved by the department and must offer potential benefits in terms of public health, the environment, or energy or resources conservation.

F. Terms starting with the letter 'F' are defined as follows:

~~[AD-]~~(1) "failed system" means, without limitation, an on-site liquid waste system that does not operate as permitted, that does not provide a level of treatment at least as effective as that provided by on-site liquid waste systems that meet the requirements of 20.7.3 NMAC ~~[and the New Mexico Design Standards]~~, or that poses a hazard to public health or degrades a body of water; and,

~~[AE-]~~(2) "fixture units" means a quantity of flow as defined in the UPC upon which plumbing systems are sized~~[;]~~.

G. Terms starting with the letter 'G' are defined as follows:

(1) "gravels" means, for purposes of soils classifications, a soil separate consisting of particles greater than 2 mm in diameter;

~~[AF-]~~(2) "graywater" means untreated household wastewater that has not come in contact with toilet waste and includes wastewater from bathtubs, showers, washbasins, clothes washing machines and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers or laundry water from the washing of material soiled with human excreta, such as diapers~~[-]; and,~~

~~[AG-]~~(3) "ground water" means interstitial water which occurs in saturated earth material and which is capable of entering a well in sufficient amounts to be utilized as a water supply~~[;]~~.

H. Terms starting with the letter 'H' are defined as follows:

~~[AH-]~~(1) "hazard to public health" means the indicated presence in water or soil of biological, chemical or other contaminants under such conditions that could adversely impact human health, including without limitation surfacing liquid waste, ~~[damage to]~~ degradation to a body of water used as a domestic water supply source, presence of an open cesspool or tank, or exposure of liquid waste or septage in a manner that allows transmission of disease;

~~[AI-]~~(2) "holding tank" means a non-discharging watertight tank designed to receive and retain liquid waste for periodic pumping and disposal off-site;

(3) "homeowner" means a person or persons who owns and occupies, or plans to occupy, a single family home; and,

(4) "household hazardous waste" means a wide range of household products, including but not limited to, pesticides and herbicides, oil-based paints and stains, automobile fluids (antifreeze, motor oil, transmission, steering, and brake fluids, gasoline), pool chemicals, hobby chemicals and darkroom chemicals which have the characteristics of hazardous waste when discarded.

I. Terms starting with the letter 'I' are defined as follows:

~~[AJ-]~~(1) "imminent hazard to public health or safety" means any situation with the potential to immediately and adversely impact or threaten public health or safety;

~~[AK-]~~(2) "impervious formation" means any soil or rock formation with a ~~[percolation rate slower than 120 minutes per inch]~~ hydraulic conductivity of  $10^{-7}$  cm/sec;

(3) "industrial process wastewater" means non-household wastewater, excepting the following: human excreta, used water from showers, washbasins, and dishwashers, and food preparation waste. Any wastewater generated in a commercial activity that contains the materials prohibited by Subsection A of 20.7.3.304 NMAC is industrial process wastewater.

(4) "inspector" means a person certified by the department to be competent in the physical examination and evaluation of on-site liquid waste systems;

~~[AL-]~~(5) "interstitial water" means water in spaces between solid earth particles; and,

(6) "invert" means the lowest portion of the internal cross section of a pipe or fitting.

J. Terms starting with the letter 'J' are defined as follows: [RESERVED]

K. Terms starting with the letter 'K' are defined as follows: [RESERVED]

L. Terms starting with the letter 'L' are defined as follows:

(1) "lateral" means a secondary water or wastewater pipeline branching directly from a central supply pipeline or manifold leading to an irrigation site;

~~[AM-]~~(2) "limiting layer" means an impervious formation, [or soils with a percolation rate faster than 5 minutes per inch;] a type Ia or type IV soils described in Table 703.1, bedrock, or the seasonal high ground water table;

~~[AN-]~~(3) "liner" means a manufactured or naturally occurring substance which restricts seepage to no more than [0.5 acre foot per year per acre (0.01 gallons per day per square foot or 4.8 x 10<sup>-7</sup> cm/sec.)] over the design service life of the lined unit. Manufactured liners must have a minimum single-ply thickness of 20 mils;

(4) "liquid capacity" means the volume of liquid that is contained in a septic tank or treatment unit measured from the invert of the outlet. "Liquid capacity" shall be calculated by multiplying the inside length by the inside width by the depth measured from the invert of the outlet to the unit's floor and converting the resulting sum to gallons;

~~[AQ-]~~(5) "liquid waste" means [graywater or blackwater which may contain] the discharge of wastewater from any residential or commercial unit where the total wastewater discharge is 2000 gallons per day or less. Liquid waste includes without limitation human excreta and water carried waste from [typical residential] plumbing fixtures [and activities], including, but not limited to, wastes from toilets, sinks, showers, baths clothes- and dish-washing machines, and floor drains. Liquid waste also includes non-water carried wastes discharged into holding tanks, privies, and vaults. Specifically excluded from the definition of liquid waste are [commercial] industrial process wastewaters, roof drainage, mine or mill tailings or wastes[, and wastes containing high concentrations of stabilizing or deodorizing agents];

~~[AP-]~~(6) "liquid waste treatment unit" means [a watertight unit designed, constructed and installed to separate and retain solids and to stabilize liquid waste and includes, but is not limited to, aerobic liquid waste treatment units and septic tanks;] a component of the on-site liquid waste system where removal, reduction, or alternation of the objectionable constituents of wastewater is designed to occur. It may include a holding component but does not include native soil;

~~[AQ-]~~(7) "load" or "loading" means:

([1]a) In the context of the biological or chemical load received by an on-site liquid waste system, the amount of material applied to an on-site system liquid waste component per unit area or unit volume;

([2]b) In the context of the structural load applied to an on-site liquid waste structural component, the structural force applied to a liquid waste system component per surface area; and,

~~[AR-]~~(8) "lot" means a unified parcel where liquid waste will be generated or disposed, excluding roadways and roadway easements, and liquid waste disposal easements, legally recorded or validated by other means. "Lot" includes any contiguous parcel subject to a legally recorded perpetual easement which dedicates the servient parcel for the disposal of liquid waste generated on the dominant parcel[;].

M. Terms starting with the letter 'M' are defined as follows:

(1) "maintenance contract" means a contract between the system owner and a maintenance entity in which the maintenance entity agrees to provide periodic inspections for system compliance. This contract will also authorize the maintenance entity to operate, maintain, and repair the system as needed;

(2) "maintenance service provider" means a public entity, company or individual in the business of maintaining liquid waste systems according to manufacturers' specification;

(3) "manifold" means a part of a water distribution system normally located between the laterals and central supply line. The manifold splits the flow into a number of flows, either for distribution or for application to the land;

(4) "may" means discretionary, permissive, or allowed; and,

~~[AS-]~~(5) "modify a liquid waste system" means:



- (~~1~~)a to change the method of on-site liquid waste treatment or disposal;
- (~~2~~)b to expand the on-site liquid waste system;
- (~~3~~)c ~~[to alter]~~ change the horizontal or vertical location of ~~[the on-site liquid waste system]~~

disposal;

(~~4~~)d to increase the amount of design flow or load received by the on-site liquid waste system above the original design flow or load; or,

(e) replace the treatment unit or disposal system.

(~~5~~) to remove or replace component materials in a disposal system; or

~~(6) to change the size or boundaries of a lot with an existing on-site liquid waste system so that the total design flow for the lot exceeds the total design flow limitation provided by the formula in Subsection C of 20.7.3.302 NMAC;~~

N. Terms starting with the letter 'N' are defined as follows: **Reserved.**

~~[AT. "new and innovative technology" means without limitation liquid waste treatment technology, processes, equipment or components which are not fully proven in the circumstances of their intended use, but, based upon documented research and demonstration, appear to offer benefits which outweigh the potential risks of failure. New and innovative technology must be significantly different from technology recognized and allowed by the New Mexico Design Standards and must offer potential benefits in terms of public health, the environment, or energy or resources conservation;]~~

~~[AU. "New Mexico design standards" means 20.7.3.401–410 NMAC, the uniform plumbing code, and those specifications and construction standards for on-site liquid waste systems promulgated by the environmental improvement board for general use. In the event of conflict between the requirements of the uniform plumbing code and other requirements contained in the New Mexico design standards, the more stringent requirements shall apply;]~~

~~[AV. "nitrate nitrogen" or "NO<sub>3</sub>" means the most highly oxidized form of nitrogen found in wastewater or effluent.]~~

O. Terms starting with the letter 'O' are defined as follows:

~~[AW.](1)~~ "off-site water" means that the domestic water supply for the lot is from:

(~~1~~)a a private water supply source which is neither within the lot nor outside the lot within one hundred (100) feet of the property line of the lot; or

(~~2~~)b a public water supply source which is not within the lot;

~~[AX.](2)~~ "on-site" means located on or within a lot;

~~[AY.](3)~~ "on-site liquid waste system" means a liquid waste system, or part thereof, serving a ~~[dwelling, establishment or group,]~~ residential or commercial unit and using a liquid waste treatment unit designed to receive liquid waste followed by either a soil treatment or other type of disposal system. On-site liquid waste systems include enclosed systems, holding tanks, vaults, and privies but do not include systems or facilities designed to receive or treat mine or mill tailings or wastes;

~~[AZ.](4)~~ "on-site water" means that the domestic water supply for the lot is from:

(~~1~~)a a private water supply source which is within the lot or within one hundred (100) feet of the property line of the lot; or

(~~2~~)b a public water supply source which is within the boundaries of the lot; and

~~[BA.](5)~~ "owner" means any person who owns an on-site liquid waste system or any component thereof, or any lot upon which any on-site liquid waste system or any component thereof is located[;].

P. Terms starting with the letter 'P' are defined as follows:

~~[BB.](1)~~ "percolation rate" means the rate of entry of water into soil as determined by a standard soil test at the depth and location of the proposed soil disposal system;

(2) "permanently displayed" means, in context of septic tank legends, embossed into the tank surface or a mechanically attached, non-corrosive plate;

(3) "permit" means a written approval from the department to install, modify, or operate an on-site liquid waste system;

~~[BC.](4)~~ "permittee" means any owner of a permitted on-site liquid waste system;

~~[BD.](5)~~ "person" means any individual, partnership, firm, public or private corporation, association, trust, estate, the state or any political subdivision or agency, or any other legal entity or their legal representative, agents or assigns;

~~[BE.](6)~~ "primary treatment" means a liquid waste treatment process that takes place in a treatment unit and allows those substances in wastewater that readily settle or float to be separated from the water being treated;

~~[BF-]~~(7) "private water supply source" means a water supply source such as a well, spring, infiltration gallery, or surface water withdrawal point used to provide water to a water supply system, if such system does not have at least fifteen (15) service connections and does not serve an average of twenty-five (25) individuals at least sixty (60) days out of the year;

~~[BG-]~~(8) "privy" or "outhouse" means a receptacle for non-liquid-carried human excreta allowing direct discharge to the soil;

(9) "professional engineer" or "P.E." means a practicing professional engineer licensed under the New Mexico Engineering and Survey Practice Act;

(10) "proprietary system" means a system patented, trademarked, or otherwise the intellectual property of manufacturers not in the public domain; and,

~~[BH-]~~(11) "public water supply source" means a water supply source such as a well, spring, infiltration gallery, or surface water intake structure used to provide water to a public water supply system for human consumption if the system served has at least fifteen (15) service connections or regularly services an average of twenty-five (25) individuals at least sixty (60) days out of the year[;].

R. Terms starting with the letter 'R' are defined as follows:

(1) "repair" means servicing or replacing, with like kind, mechanical or electrical parts of an approved liquid waste system, pumping of septage, or making minor structural corrections to a tank or distribution box;

~~[BL-]~~(2) "residential unit" means a ~~[dwelling]~~ structure that is primarily used for living quarters but does not include facilities listed in Table 201.1;

~~[BJ-]~~(3) "replacement area" means an area within a lot designated to allow future construction of a replacement disposal area as required by Subsection C of 20.7.3.401 NMAC;

(4) "retention/detention area" means an area on a parcel of property specifically designated and designed to capture and hold water resulting from the runoff of precipitation; and,

~~[BK-]~~(5) "roadway" means the surface area of land dedicated by easement or use to provide vehicular passage serving more than one lot or more than five residential or commercial units on a single property[;].

S. Terms starting with the letter 'S' are defined as follows:

(1) "sand" means:

(a) a soil separate consisting of individual rock or mineral fragments that range in diameter from 0.005 to 2.0 millimeters; or,

(b) the textural class name of any soil that contains 85% or more sand and not more than 10% clay;

~~[BL-]~~(2) "seasonal high ground water table" means the highest level to which the upper surface of ground water may be expected to rise within twenty-four (24) consecutive months;

~~[BM-]~~(3) "seasonal high water flow" means the highest level which perennial or intermittent surface waters may be expected to rise ~~[within twenty-four (24) consecutive months]~~ as a result of a 25 year, 6 hour storm event;

~~[BN-]~~(4) "secondary treatment" means a wastewater treatment process used to convert dissolved or suspended materials into a form more readily separated from the water being treated. The process is commonly a biological treatment process followed by settling and clarification[-] resulting in a reduction of the 5-day biochemical oxygen demand (BOD5) and total suspended solids (TSS) concentrations to a level not to exceed 30 mg/l. ~~[The minimum secondary treatment standards required by 20.7.3 NMAC for the 5 day biochemical oxygen demand (BOD5) and total suspended solids (TSS) shall be:~~

~~\_\_\_\_\_ (1) The 30 day average shall not exceed 30.0 mg/L.~~

~~\_\_\_\_\_ (2) The 30 day average percent removal shall not be less than 85 percent;]~~

~~[BO-]~~(5) "secretary" means the secretary of environment or a designated representative;

(6) "seepage pit" means a type of absorption system which uses a vertical, cylindrical underground receptacle so constructed as to allow the disposal of effluent by soil absorption through its walls;

~~[BP-]~~(7) "septage" means the residual wastes and water periodically pumped from a liquid waste treatment unit or from a holding tank;

~~[BQ-]~~(8) "septic tank" means a liquid waste treatment unit[s] designed to provide primary treatment and anaerobic treatment prior to disposal.

~~[BR-]~~(9) "setback distance" means the distance measured by a straight horizontal line between the on-site liquid waste system, its designated replacement area, or portion thereof and the object being considered;

(10) "shall" means mandatory;

(11) "silt" means:

(a) a soil separate consisting of particles between 0.05 and 0.002 millimeters in diameter; or,

(b) the textural class name of any soil that contains 80% or more silt and less than 12% clay;

(12) "soil" means sediment or other unconsolidated accumulations of mineral particles which may or may not contain organic material and which have filtering properties;

~~[BS-](13)~~ "suitable soil" means a soil, whether naturally occurring or introduced, which will treat the primary effluent effectively and act as an effective filter and remove organisms and suspended solids prior to the effluent reaching ground water, bedrock or a limiting layer, and which will provide adequate transmission to prevent a failed system. Suitable soils are [minimally characterized by percolation rates between five (5) and one hundred twenty (120) minutes per inch;] classified as type Ib, II, or III soils as classified in Table 703.1; and,

~~[BT-]"surface application" means the application of disinfected effluent to the ground surface[;].~~

T. Terms starting with the letter 'T' are defined as follows:

(1) "tertiary treatment" means additional treatment beyond secondary treatment standards, specifically, the reduction in the total nitrogen concentration;

~~[BU-](2)~~ "test hole" means a hole dug in the proposed disposal field area a minimum of seven (7) feet deep or four (4) feet below the bottom of disposal field, whichever is greater, and a minimum of two (2) feet wide. The test hole shall be sufficient to examine the soil visually for type, structure, mottling, impervious layers, and other soil characteristics, and to determine the seasonal high water table level. A soil boring may be used to determine the soil characteristics and soil depth;

~~[BV-](3)~~ "total design flow" means the sum of design flows for all on-site liquid waste systems and other wastewater discharges on a lot;

~~[BW-](4)~~ "total nitrogen" or "NT" means the combined organic nitrogen, ammonia, nitrite and nitrate contained in the wastewater or effluent; and,

(5) "total suspended solids" or "TSS" means the measurable component of solid matter suspended in water or wastewater.

U. Terms starting with the letter 'U' are defined as follows:

~~[BX-](1)~~ "uniform plumbing code" or "UPC" means the [1994] 1997 uniform plumbing code, 14.11.3 NMAC, the [1991 state of New Mexico plumbing code and mechanical code—uniform plumbing code, 14 NMAC 11-2,] and the [1994] 1997 state of New Mexico plumbing code and mechanical code [—uniform mechanical code], 14.9.2 NMAC, or the successor versions of each as adopted by the construction industries division of the New Mexico regulation and licensing department and promulgated in the New Mexico administrative code; and,

(2) [RESERVED]

V. Terms starting with the letter 'V' are defined as follows:

(1) "vault" means a non-discharging, watertight tank designed to receive and retain non-liquid carried human excreta for periodic pumping and disposal off-site; and,

(2) "variance" means an administrative procedure authorizing the issuance of a permit or use of a system that does not meet the specific requirements of 20.7.3 NMAC but which meet the intent of 20.7.3 NMAC.

W. Terms starting with the letter 'W' are defined as follows:

~~[BY-](1)~~ "wastewater" means blackwater and graywater;

~~[BZ-](2)~~ "watercourse" means any [surface]perennial, intermittent, or ephemeral surface water conveyance channel including but not limited to a river, creek, arroyo, draw, canal or wash, or any other channel having definite banks and beds with visible evidence of the flow of water[;].

(3) "water(s) of the state" means all interstate and intrastate waters including, natural ponds and lakes, playa lakes, reservoirs, perennial streams and their tributaries, intermittent streams, sloughs, prairie potholes, and wetlands;

(4) "watertight" means not allowing water to pass in or out or as otherwise determined in 20.7.3 NMAC; and,

(5) "wetlands" means those areas which are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions in New Mexico. Constructed wetlands are not included in this definition.

X. Terms starting with the letter 'X' are defined as follows: [RESERVED]

Y. Terms starting with the letter 'Y' are defined as follows: [RESERVED]

Z. Terms starting with the letter 'Z' are defined as follows: [RESERVED]

[10/15/97; 20.7.3.7 NMAC - Rn, 20 NMAC 7.3.1.107, 3/1/04, & A, 3/1/04]

## **20.7.3.8 GENERAL PROVISIONS:**



A. Interpretation: The definitions in 20.7.3.7 NMAC shall be construed so as to achieve the objective of 20.7.3 NMAC.

B. Alternative Resources: When guidance is sought in areas not covered by 20.7.3 NMAC, the most recent version of the following resources may provide guidance. In cases where reference to these alternative resources is proposed the Department shall make the final determination of applicability.

- (1) The American national standards institute (ANSI) book of codes;
- (2) The American society for testing and materials (ASTM) testing manual;
- (3) The international association of plumbing and mechanical officials (IAPMO) codes;
- (4) The National sanitation foundation (NSF) standard 40 ~~[and Standard C9]~~, standard 41, and standard 46; ~~and~~
- (5) EPA Design Manuals for onsite wastewater treatment and disposal systems[-];
- (6) USDA soil survey manuals; and
- (7) New Mexico administrative codes.

~~[C. Authority to Disconnect Source of Water Supply: The department may disconnect the source of water supply to a commercial or dwelling unit that is served by any on-site liquid waste system that has become a failed system and that presents an imminent hazard to public health. This authority includes authority to disconnect power utilities if necessary to disconnect the source of water supply. The department shall give notice of its actions to the lot owner and the tenants affected.]~~

~~D. Technical Advisory Committee:~~

- ~~(1) The secretary may appoint a technical advisory committee to assist the department in an advisory capacity on materials, systems, processes, equipment approvals and technical specification review and approvals.~~
  - ~~(2) The technical advisory committee will meet at the discretion of the department.~~
- ~~Recommendations of the committee regarding matters within the scope of Paragraph (1) of Subsection D of 20.7.3 NMAC will be presented to the department for review and evaluation. The department will make the final decision on any recommendation of the committee.]~~

~~[10/15/97; 20.7.3.8 NMAC - Rn, 20 NMAC 7.3.I.100, I.108 -I.111, 3/1/04]~~

#### **20.7.3.9 through 20.7.3.200 [RESERVED]**

#### **~~[20.7.3.201 PROCEDURES; LIQUID WASTE SYSTEM PERMITS~~**

~~A. No person shall install or have installed a new on-site liquid waste system or modify or have modified an existing on-site liquid waste system, unless that person obtains a permit issued by the Department prior to construction of such installation or modification.~~

~~(1) No person shall construct or modify a dwelling on, or transport a dwelling onto, a lot for which an on-site liquid waste system is required unless the Department has issued an on-site liquid waste system permit prior to such construction, modification, or transportation.~~

~~(2) No person shall construct, install, repair or modify an on-site liquid waste system unless that person holds a valid contractors license issued by the New Mexico construction industries division, except that a single family residential property owner may construct, install, repair or modify permitted septic tanks and conventional trench or bed disposal fields on his or her own property after obtaining a permit without such a license.~~

~~(3) A permit is not required for graywater discharges or for systems designed for the discharge of graywater that meet the requirements of 20.7.3.310 NMAC.~~

~~B. Obtaining a permit from the Department for installation or modification of an on-site liquid waste system does not relieve any person from the responsibility of obtaining any other approval, license or permit required by state, city or county regulations or ordinances or other requirements of state or federal laws.~~

~~C. Any person seeking a permit shall do so by submitting an application to the field office of the Department having jurisdiction for the area where the system is to be installed or modified. The application shall be:~~

- ~~(1) made on a form provided by the Department;~~
- ~~(2) accompanied by such other relevant information as the Department may reasonably require or that the applicant may consider appropriate; and~~
- ~~(3) signed by the applicant or their authorized representative.~~

~~D. The Department may require any or all of the following information before a permit is issued for an on-site liquid waste system, or at any time during the construction thereof.~~

~~(1) A Site plan, completely dimensioned, showing direction and approximate slope of surface, location of all present or proposed retaining walls, arroyos, canals, irrigation or drainage channels, water supply lines, wells or other water sources, other on-site liquid waste systems, paved areas, roadways, structures, plumbing~~

~~fixtures in each structure, and location of the proposed liquid waste system and replacement area with relation to lot lines and structures, and to all sources of public water supply located within two hundred (200) feet.~~

~~\_\_\_\_\_ (2) Sufficient details of construction, materials, and components necessary to assure compliance with the requirements of this Part, including a full description of the complete installation, quality, kind and grade of all materials, equipment, construction, and methods of assembly and installation.~~

~~\_\_\_\_\_ (3) A log of soil formations and ground water level as determined by soil borings or a test hole(s) dug in close proximity to any proposed seepage pit or disposal field, together with a statement of water absorption characteristics of the soil at the proposed site as determined by approved percolation tests.~~

~~\_\_\_\_\_ E. Department Responses~~

~~\_\_\_\_\_ (1) Except as otherwise provided in Paragraph (2) of Subsection E of 20.7.3.201 NMAC the Department shall, within ten (10) working days after receipt of the completed application, grant the permit, grant the permit subject to conditions, or deny the permit and shall notify the applicant of the action taken.~~

~~\_\_\_\_\_ (2) If the Department's initial review of the application indicates that the imposition of more stringent requirements may be necessary pursuant to Subsection F of 20.7.3.201 NMAC or Subsection C of 20.7.3.301 NMAC, the Department may extend the time for the review of the application until twenty (20) working days after receipt of the completed application provided that the Department shall notify the applicant of such extension within ten (10) working days after receipt of the completed application.~~

~~\_\_\_\_\_ (3) When the permit is granted subject to conditions or denied, the reason for the action shall refer to the appropriate regulation(s) and be given in writing.~~

~~\_\_\_\_\_ F. If the Department finds that specific requirements in addition to or more stringent than those provided in 20.7.3.301–309 NMAC and 20.7.3.401–410 NMAC are necessary to prevent a hazard to public health or the degradation of a body of water, the Department may issue permit conditions with more stringent requirements or additional specific requirements. Such additional or more stringent requirements may apply to system design, siting, construction, inspection, operation and monitoring.~~

~~\_\_\_\_\_ G. The Department shall deny the permit if the proposed system will not meet the requirements of 20.7.3 NMAC or the New Mexico design standards.~~

~~\_\_\_\_\_ H. The Department shall maintain a file of all permits issued and denied. The file shall be open for public inspection.~~

~~\_\_\_\_\_ I. The installation or modification of an on-site liquid waste system shall be in accordance with the permit. Any change from the permitted installation or modification, including a change of contractor, must receive written Department approval prior to implementation.~~

~~\_\_\_\_\_ J. No person shall operate or use an on-site liquid waste system until the Department has granted final approval of the system after installation or modification of the system is completed. No person shall occupy a newly constructed or transported dwelling for which an on-site liquid waste system is required until the Department has granted such final approval, and, if applicable, until the governmental body with authority to regulate construction has granted an occupancy permit. The Department shall not grant final approval if the system as installed or modified does not meet the requirements of this Part and the New Mexico Design Standards.~~

~~\_\_\_\_\_ K. The Department may cancel a permit if the installation or modification of the on-site liquid waste system has not been completed within one (1) year after issuance, or if the Department determines that material information in the application is false, incomplete, or inaccurate and that the correct information would have resulted in the Department denying the original application. If a permit is canceled, the Department shall notify the permittee of the decision in writing and the reason for cancellation and appropriate regulations cited.~~

~~[10/15/97; 20.7.3.201 NMAC—Rn, 20 NMAC 7.3.II.200, 201, 3/1/04 & A, 3/1/04]]~~

### **20.7.3.201 PROCEDURES - GENERAL REQUIREMENTS**

A. Every owner shall be responsible for the storing, treating, and disposing of liquid waste generated on that property.

B. No person shall discharge untreated liquid waste except into a permitted enclosed system, a permitted liquid waste treatment unit, or a public sewer system, except for the discharge of graywater pursuant to 20.7.3.810 NMAC. No person shall discharge liquid waste or effluent into a cesspool or effluent disposal well.

C. No person shall discharge effluent from a liquid waste treatment unit except through a permitted liquid waste disposal system or to a permitted sewer system. No person shall discharge effluent from a liquid waste treatment unit to an effluent disposal well.

D. No person shall install, have installed, modify or have modified, own, operate, or use an on-site liquid waste system which, by itself or in combination with other on-site liquid waste systems, may cause a hazard to public health or degrade any body of water.

E. All residential and commercial units utilizing an on-site liquid waste system shall connect to a public sewer if required by the local authority having jurisdiction.

F. The type of on-site liquid waste system shall be determined on the basis of location, lot size, soil and site characteristics. The system, except as otherwise approved, shall consist of a liquid waste treatment unit and associated disposal system.

G. An on-site liquid waste system shall be located wholly on the same lot, which is the site of the source or sources served by the on-site liquid waste system.

H. All disposal systems that utilize subsurface discharge and soil absorption shall be designed so that additional seepage pits, drainfields or other subsurface absorption areas equivalent to at least 100% of the required original disposal system may be installed if the original system cannot dispose of all the liquid waste. No division of a lot or construction or remodeling of a permanent structure on the lot shall be made if such division, construction or remodeling impairs the usefulness of the 100% replacement area.

I. A privy may be used for the disposal of human excreta and toilet paper, but not for the disposal of other liquid wastes.

J. Recreational vehicle (RV) dump stations shall be connected to a non-discharging system that is designed to receive and does receive 2000 gallons per day or less.

K. On-site liquid waste systems permitted, but not installed, prior to the effective date of 20.7.3 NMAC shall be installed in accordance with the regulations in effect at the time of the permit issuance, provided that the installation of the system shall be completed within one (1) year of the effective date of 20.7.3 NMAC.

L. On-site liquid waste systems installed prior to the effective date of 20.7.3 NMAC shall meet the requirements of the regulations in effect at the time of their initial installation or most recent permitted modification.

M. Nothing contained in 20.7.3 NMAC shall be construed to prevent the Department from requiring compliance with more stringent requirements than those contained herein, where the Department finds that such more stringent requirements are necessary to prevent a hazard to public health or the degradation of a body of water.

N. The secretary or a designated representative, upon presentation or proper credentials:

(1) shall have the right of entry to, upon, or through any premises on which a permitted or unpermitted on-site liquid waste system regulated by 20.7.3 NMAC exists or is required;

(2) shall have the right to enter onto any premises on which any records that are required to be maintained by 20.7.3 NMAC or by permit conditions are located; and,

(3) may at reasonable times:

(a) have access to and copy any records required to be established and maintained by 20.7.3 NMAC or permit conditions;

(b) inspect any premises or equipment to determine compliance with 20.7.3 NMAC or any permit conditions; and,

(c) obtain any samples required to determine compliance with 20.7.3 NMAC or permit conditions.

O. Design flows shall be calculated as follows:

(1) For residential sources, the design flow shall be calculated assuming two (2) persons per bedroom for the first two (2) bedrooms and one (1) person per additional bedroom in a single family dwelling unit, and seventy-five (75) gallons per person per day. Multiple family dwelling unit source design flows shall be calculated as the sum of design flows for each single family unit included; and,

(2) Design flows for nonresidential sources shall be based on Table 201.1 or generally accepted references (such as the uniform plumbing code or the USEPA design manual: *on-site wastewater treatment and disposal systems*). Design flows for nonresidential sources also may be based on professional engineering or professional design calculations, if more restrictive, or measured flows. Total design flows determined by meters or other measuring devices shall be multiplied by a safety factor of 1.5 for peak design flow.

**Table 201.1: Established liquid waste design flow rates:**

<u>TYPE OF OCCUPANCY</u>	<u>GALLONS PER DAY</u>
<u>1. Airport, Bus Terminal, Train Station</u>	<u>20 per employee</u>
	<u>5 per passenger</u>
<u>2. Beauty &amp; Barber Shop</u>	<u>75 per service chair</u>
<u>3. Bowling alleys (snack bar only)</u>	<u>75 per lane</u>
<u>4. Bed and Breakfast</u>	<u>150 first bedroom</u>

	100 each additional bedroom
5. Camps:	
campground with central comfort station	35 per person
with flush toilets, no showers	25 per person
day camps (no meals served)	15 per person
summer and seasonal	50 per person
6. Churches (Sanctuary)	2 per seat
with kitchen waste	7 per seat
7. Dance hall	5 per person
8. Doctor and Dentist Office	250 per practitioner,
	15 per employee
9. Factories: per 8-hour shift	
no showers	25 per employee
with showers	35 per employee
cafeteria, add	5 per employee
10. Food Operations:	
Restaurants operating 16 hours or less per day	40 per seat
Restaurants operating nor than 16 hours per day	60 per seat
Bar, cocktail lounge	20 per seat
add per pool table or video game	15 each
Carry out only, including caterers	50 per 100 sq ft floor space
add per 8-hour shift	20 per employee
Food outlets only	10 per 100 sq ft floor space
add for deli	40 per 100 sq ft floor space
add for bakery	40 per 100 sq ft floor space
add for meat department	75 per 100 sq ft floor space
add per public restroom	200
11. Hotels, Motels, Lodges	60 per bed
laundries, lounges and restaurants calculated separately	
12. Institutions (resident)	75 per person
Nursing homes	125 per person
Rest homes	125 per person
13. Laundries	
self-service(minimum 10 hours/day)	50 per wash cycle
commercial	per manufacturer's specifications
14. Offices	20 per employee per 8-hour shift
15. Parks:	
picnic park - toilets only	20 per parking space
16. Recreation Vehicles (RV) Park	
without water hookup	75 per space
with water and sewer hookup	100 per space
RV dump stations	50 per unit
17. Schools - staff and office	20 per person
Elementary and Day Care	15 per student
Intermediate and High	20 per student
Boarding, total waste	100 per person
gym and showers, add	5 per student
with cafeteria, add	3 per student
18. Service stations and convenience stores	400 per toilet
uni-sex restrooms	800 per Toilet
19. Stores	20 per employee
public restrooms	10 per 100 sq ft. floor
20. Swimming and bathing places,	
including spas and hot tubs, public	10 per person
21. Theaters, auditoriums	5 per seat
Drive-ins	10 per space

22. Veterinary Clinic	250 per practitioner
add	15 per employee
add	20 per kennel, stall, or cage

Depending on the waste characteristics, the liquid waste generated by the occupancies above may require pretreatment prior to utilizing a conventional treatment system.

P. The minimum liquid capacity of a septic tank shall be determined as follows:

(1) for residential units, the liquid capacity shall be based on the number of bedrooms using Table 201.2; and,

(2) for commercial units, the liquid capacity shall be based on the number of plumbing fixture units using Table 201.2; or,

(3) if based on estimated design flows pursuant to Paragraph (2) of Subsection O of 20.7.3.201 NMAC, the minimum liquid capacity shall be 2.5 times the design flow, whichever is greater.

**Table 201.2: Capacity of Septic Tanks**

<u>Single family dwellings, number of bedrooms</u>	<u>Other uses, maximum fixture units*</u>	<u>Minimum septic tank capacity in gallons served</u>
1	10	750
2 - 3	12	1000
4	15	1200
5 - 6	20	1500
7 - 9	27	2000
	29	2250
	32	2500
	35	2750

\* Fixture units less than 100 are equal to 31.1 gallons per fixture unit.

[20.7.3.201 NMAC - N, x/x/200x]

**[20.7.3.202 PROCEDURES; VARIANCES**

A. Any person seeking a variance from the requirements contained in this Part shall do so by filing a written petition with the field office of the Department having jurisdiction for the area where the system is to be installed.

B. The petition shall be:

(1) made on a form provided by the Department;

(2) accompanied by relevant documents or materials which the petitioner believes would support the petition;

(3) accompanied by documentation, including addresses, demonstrating that all owners of adjacent property sharing a common border with the lot for which the variance is sought have been notified of the nature of the variance petition, the date of submission of the petition to the Department, the address of the Department field office to which the petition is being submitted, and the time frame for Department action as provided in Subsection C of 20.7.3.202 NMAC, unless all adjacent properties are more than one thousand (1,000) feet from the on-site liquid waste system for which the variance is sought;

(4) accompanied by such other relevant information as the Department may reasonably require; and

(5) signed by the petitioner or an authorized representative.

C. The Department shall, after a minimum of ten (10) but not more than twenty (20) working days following receipt of the completed petition, grant the variance, grant the variance subject to conditions, or deny the variance and shall so notify the applicant and any other person making a written submission concerning the petition. The reason for the Department's action shall be provided in writing and the appropriate regulations cited.

D. The Department shall deny the variance petition unless the petitioner establishes by clear and convincing evidence that:

(1) the proposed on-site liquid waste system will, by itself or in combination with other on-site liquid waste systems, or other discharges subject to 20.6.2.3000 through 20.6.2.3114 NMAC, neither cause a hazard to public health or degrade any body of water; and

(2) granting the variance will result in public health and environmental protection equal to or greater than the minimum protection provided by the variances requirement.



~~\_\_\_\_\_ E. \_\_\_\_\_ The Department shall maintain a file of all variances granted and denied. The file shall be open for public inspection.~~

~~\_\_\_\_\_ F. \_\_\_\_\_ The factors listed below as applicable, shall be considered in evaluating petitions for variances from the principal requirements of subpart III. This list is illustrative, not exhaustive. Similarly, some of the factors listed within a category may not be important in specific cases.~~

~~\_\_\_\_\_ (1) \_\_\_\_\_ Lot size requirements (See also 20.7.3.302 NMAC).~~

~~\_\_\_\_\_ (a) \_\_\_\_\_ Proposed system discharge: (1) Design flow — projected average flows, basis for projection; (2) Discharge quality — degree of treatment, separation of black water, and so forth; (3) Type of system — trenches, bed, pit, pressure distribution, and so forth; (4) Location and arrangement of discharge in relation to property boundaries.~~

~~\_\_\_\_\_ (b) \_\_\_\_\_ Geological factor: (1) Depth to seasonal high ground water table; (2) Distance to seasonal high water flow; (3) Intervening stratigraphy: geological layer composition (sand, clay, rock) and thickness, type and degree of fracture of bedrock, information from well logs; (4) Presence of any barriers to pollutant movement.~~

~~\_\_\_\_\_ (c) \_\_\_\_\_ Hydrological factors: (1) Ground water flow direction and gradient; (2) Transmissivity of the aquifer; (3) Background quality of the ground water; (4) Thickness of the saturated aquifer; (5) Projected mixing depth of effluent with groundwater; (6) Human influences in ground water flow direction and gradient, such as pumping wells, irrigation, and agricultural drains.~~

~~\_\_\_\_\_ (d) \_\_\_\_\_ Miscellaneous additional factor: (1) Current and future housing density in the area — notably legal limitation; (2) Potential for future community sewer; (3) Current and future use of the ground water.~~

~~\_\_\_\_\_ (2) \_\_\_\_\_ Setback requirements (See also Section 20.7.3.303 NMAC).~~

~~\_\_\_\_\_ (a) \_\_\_\_\_ Proposed system discharge:~~

~~\_\_\_\_\_ (i) \_\_\_\_\_ Design flow — projected average and peak flows, and the basis for projection;~~

~~\_\_\_\_\_ (ii) \_\_\_\_\_ Discharge quality — degree of treatment, separation of black water, and so forth;~~

~~\_\_\_\_\_ (iii) \_\_\_\_\_ Type of system — trenches, bed, pit, pressure distribution, and so forth;~~

~~\_\_\_\_\_ (iv) \_\_\_\_\_ Location and arrangement of discharge in relation to all objects in listed in Table~~

~~303.1.~~

~~\_\_\_\_\_ (b) \_\_\_\_\_ Geological factor:~~

~~\_\_\_\_\_ (i) \_\_\_\_\_ Depth to seasonal high ground water table;~~

~~\_\_\_\_\_ (i) \_\_\_\_\_ Distance to seasonal high water flow;~~

~~\_\_\_\_\_ (i) \_\_\_\_\_ Intervening stratigraphy — geological layer composition (sand, clay, rock) and thickness, type and degree of fracture of bedrock, information from well logs;~~

~~\_\_\_\_\_ (i) \_\_\_\_\_ Presence of any barriers to pollutant movement.~~

~~\_\_\_\_\_ (c) \_\_\_\_\_ Hydrological factors:~~

~~\_\_\_\_\_ (i) \_\_\_\_\_ Ground water flow direction and gradient;~~

~~\_\_\_\_\_ (ii) \_\_\_\_\_ Transmissivity of the aquifer;~~

~~\_\_\_\_\_ (iii) \_\_\_\_\_ Background quality of the ground water;~~

~~\_\_\_\_\_ (iv) \_\_\_\_\_ Thickness of the saturated aquifer. (5) Projected mixing depth of effluent with groundwater;~~

~~\_\_\_\_\_ (v) \_\_\_\_\_ Human influences in ground water flow direction and gradient, such as pumping wells, irrigation, and agricultural drains.~~

~~\_\_\_\_\_ (d) \_\_\_\_\_ Factors relating to the setback objects:~~

~~\_\_\_\_\_ (i) \_\_\_\_\_ Water supply well construction and protection — sanitary surface seal, casing sealed past first aquifer, depth of solid casing, depth of screen;~~

~~\_\_\_\_\_ (ii) \_\_\_\_\_ Well pumping rates and projected drawdown;~~

~~\_\_\_\_\_ (iii) \_\_\_\_\_ Whether the watercourse is losing or gaining with respect to local ground water;~~

~~\_\_\_\_\_ (iv) \_\_\_\_\_ Potential for future construction of well, canals, and so forth in area;~~

~~\_\_\_\_\_ (v) \_\_\_\_\_ Potential for future change in watercourse or lake shore;~~

~~\_\_\_\_\_ (vi) \_\_\_\_\_ Potential flooding effects.~~

~~\_\_\_\_\_ (e) \_\_\_\_\_ Miscellaneous additional factors:~~

~~\_\_\_\_\_ (i) \_\_\_\_\_ Current and future housing density in the area — notably legal limitation;~~

~~\_\_\_\_\_ (ii) \_\_\_\_\_ Current and future use of the groundwater that could be affected by the proposed system.~~

~~\_\_\_\_\_ (3) \_\_\_\_\_ Clearance requirements (See also 20.7.3.304 NMAC).~~

~~\_\_\_\_\_ (a) \_\_\_\_\_ Proposed system discharge:~~

~~\_\_\_\_\_ (i) \_\_\_\_\_ Design flow — projected average and peak flows, and the basis for projection;~~

~~\_\_\_\_\_ (ii) Discharge quality degree of treatment, separation of black water, sand filtration, and so forth;~~

~~\_\_\_\_\_ (iii) Type of system trenches, bed, pit, pressure distribution, and so forth;~~

~~\_\_\_\_\_ (iv) Location and arrangement of discharge in relation to all objects in listed in Table 303.1.~~

~~\_\_\_\_\_ (b) Geological factors:~~

~~\_\_\_\_\_ (i) Depth to seasonal high ground water table;~~

~~\_\_\_\_\_ (ii) Distance from seasonal high water flow;~~

~~\_\_\_\_\_ (iii) Type of limiting layer and depth to limiting layer;~~

~~\_\_\_\_\_ (iv) Intervening stratigraphy geological layer composition (sand, clay, rock) and thickness, type and degree of fracture of bedrock, information from well logs;~~

~~\_\_\_\_\_ (v) Percolation rates of soils involved;~~

~~\_\_\_\_\_ (vi) Soil chemistry parameters pH, cation exchange, capacity, and so forth;~~

~~\_\_\_\_\_ (vii) Presence of any barriers to pollutant movement;~~

~~\_\_\_\_\_ (viii) Possibility of discharge to the surface at terrain breaks, embankments, road cuts, etc.~~

~~\_\_\_\_\_ (c) Hydrological factor:~~

~~\_\_\_\_\_ (i) Ground water flow direction and gradient;~~

~~\_\_\_\_\_ (ii) Transmissivities of the various soils and geological layers involved;~~

~~\_\_\_\_\_ (iii) Projected ground water mounding effects basis for projection;~~

~~\_\_\_\_\_ (iv) Background quality of the ground water;~~

~~\_\_\_\_\_ (v) Thickness of the saturated aquifer;~~

~~\_\_\_\_\_ (vi) Projected mixing depth of effluent with groundwater;~~

~~\_\_\_\_\_ (vii) Human influences in ground water flow direction and gradient, such as pumping wells, irrigation, and agricultural drains.~~

~~\_\_\_\_\_ (d) Miscellaneous additional factors:~~

~~\_\_\_\_\_ (i) Current and future housing density in the area notably legal limitation;~~

~~\_\_\_\_\_ (i) Current and future use of the water that could be affected by the proposed system.~~

~~[10/15/97; 20.7.3.202 NMAC Rn, 20 NMAC 7.3.II.202, Recompiled 11/27/01]]~~

### **20.7.3.202 PROCEDURES - MODIFICATION OF EXISTING SYSTEMS**

A. Prior to the modification of an existing on-site liquid waste system, a permit application must be submitted in accordance with 20.7.3.401-405 NMAC. The modification shall be in accordance with 20.7.3 NMAC except as noted in Subsection C of 20.7.3.202 NMAC below.

B. Replacement components for on-site liquid waste systems shall be of materials approved the department.

C. On-site liquid waste systems modified after the effective date of this regulation:

(1) shall meet the lot size requirements of the regulations in effect at the time of the initial installation or most recent modification; and,

(2) the total lot flow shall only be increased if all current standards and requirements are met pursuant to 20.7.3 NMAC. If such systems are located within an area of concern, they may require more stringent standards pursuant to Subsection M of 20.7.3.201 NMAC.

D. The septic tank need not be replaced as part of the modification if the tank is structurally sound, constructed of approved materials, meet the requirements of 20.7.3.501-502 NMAC, and if the existing tank has a liquid capacity within one tank size of the capacity required by Subsection P of 20.7.3.201 NMAC. In addition, the tank shall be pumped and the inlet and outlet baffles or sanitary tees checked and repaired or replaced, if needed. An approved effluent filter shall be installed in accordance with Subsection C of 20.7.3.502 NMAC.

E. The modification of unpermitted systems shall be preceded by an inspection. If the system is found to be installed in accordance with the regulations in effect at the time of the original installation or most recent modification and is not in an area of concern, a permit may be issued in accordance with Subsection C of 20.7.3.202 NMAC and Subsection J of 20.7.3.401 NMAC.

[20.7.3.202 NMAC - N, x/x/200x]

### **[20.7.3.203 PROCEDURES; APPEALS**

A. Any affected person who is dissatisfied with action taken by the Department on a permit application or variance petition may appeal to the Secretary. The request must be made in writing to the Secretary

within fifteen (15) working days after notice of the Department's action has been issued. Unless an appeal is received by the Secretary within fifteen (15) working days after notice to the applicant or petitioner of the Department's action the decision of the Department shall be final.

~~\_\_\_\_\_ B. \_\_\_\_\_ If an appeal is received within the fifteen (15) working day time limit, the Secretary shall hold a hearing within fifteen (15) working days after receipt of the request. The Secretary shall notify the person who requested the hearing of the date, time, and place of the hearing by certified mail. If the appeal is on a variance petition, the Secretary shall also notify all persons involved under Paragraph (3) of Subsection B of 20.7.3.202 NMAC of the hearing date, time and place of the hearing by certified mail.~~

~~\_\_\_\_\_ C. \_\_\_\_\_ In the appeal hearing, the burden of proof is on the person who requested the hearing. Where the Department requires standards more stringent than those provided in this Part, the burden of proof of the necessity for the more stringent standards shall be upon the Department.~~

~~\_\_\_\_\_ D. \_\_\_\_\_ Appeal hearings shall be held at a place designated by the Secretary in the area where the proposed on-site liquid waste system is to be located, unless other mutually agreed upon arrangements are made. The Secretary may designate a person to conduct the hearing and make a final decision or make recommendations for a final decision. The Secretary's hearing notice shall indicate who will conduct the hearing and make the final decision.~~

~~\_\_\_\_\_ E. \_\_\_\_\_ Upon request, the hearing shall be recorded. Recording costs shall be paid by the person who requests the recording.~~

~~\_\_\_\_\_ F. \_\_\_\_\_ In appeal hearings, the rules governing civil procedure and evidence in District Court do not apply. Hearings shall be conducted so that all relevant views, arguments and testimony are amply and fairly presented without undue repetition. The Secretary shall allow Department staff and the hearing requestor to call and examine witnesses, to submit written and oral evidence and arguments, to introduce exhibits, and to cross-examine persons who testify. All testimony shall be taken under oath. At the end of the hearing, the Secretary shall decide and announce if the hearing record will remain open and for how long and for what reason it will be left open.~~

~~\_\_\_\_\_ G. \_\_\_\_\_ Based upon the evidence presented at the hearing, the Secretary shall sustain, modify or reverse the action of the Department. The Secretary's decision shall be by written order within fifteen (15) working days following the close of the hearing record. The decision shall state the reasons therefor and shall be sent by certified mail to the hearing requestor and any other affected person who requests notice. Appeals from the Secretary's final decision are by Rule 1-075 NMRA 1997.~~

~~[10/15/97; 20.7.3.203 NMAC Rn, 20 NMAC 7.3.II.203, Recompiled 11/27/01]~~

### **20.7.3.[204]203 PROCEDURES; INSPECTIONS AND [SAMPLING:] TESTING**

A. \_\_\_\_\_ The department may perform site inspections prior to making a decision on a permit application or variance petition, during construction, or modification of the system, and after completion of the system. The department may require [inspection] test holes to be excavated and documentation to be provided for purposes of determining soil types, [percolation rates and] depth of soil and water table depths. The department may collect samples of soil, liquid waste, and water, including water from wells, to determine compliance with 20.7.3 NMAC.

B. \_\_\_\_\_ Upon granting the permit or variance application, if the department determines an inspection is necessary, the department shall indicate the point in the construction process where the first construction inspection is to be scheduled.

(1) \_\_\_\_\_ The person doing the work authorized by the permit shall notify the department, orally or in writing, a minimum of 2 working days before work is to commence to schedule the inspection. The department may assess a re-inspection fee if the work is not ready for inspection. In the event the inspection is not conducted within one hour after the appointed time of inspection, the contractor shall take photographs that accurately identify the site and features of the installation and proceed with the installation.

(2) \_\_\_\_\_ If an inspection results in the issuance of a notice of non-approval, a re-inspection shall be required. The person shall notify the department as indicated above.

C. \_\_\_\_\_ System components shall be properly identified as to manufacturer and shall meet all specifications specified in 20.7.3 NMAC.

D. \_\_\_\_\_ The department may require testing to verify watertight construction and initial functioning of any liquid waste system.

(1) \_\_\_\_\_ Liquid waste treatment units, pump stations, or pump chambers shall be considered watertight by successfully completing one of the following testing procedures:

(a) \_\_\_\_\_ Water pressure testing: Seal the unit, fill with water, and let stand for 24 hours. Refill the unit. The unit is approved if the water level is held for 1 hour.

(b) Vacuum testing: Seal the unit and apply a vacuum to 2 inches (50mm) of mercury. The unit is approved if the vacuum is held for 60 minutes.

(2) The department may require a flow test be performed through the system to the point of effluent disposal. All lines and components shall be watertight. Capacities, required air space, and fittings shall meet the requirements of 20.7.3 NMAC.

(3) The department may require operational testing of advanced treatment components to verify initial functioning.

[10/15/97; 20.7.3.204 NMAC - Rn, 20 NMAC 7.3.II.204, Recompiled 11/27/01]]

**20.7.3.~~[205]~~204 through 20.7.3.300 [RESERVED]**

**20.7.3.301 ~~STANDARDS; GENERAL REQUIREMENTS:~~**

~~A. No person shall discharge untreated liquid waste except into a permitted enclosed system, a permitted liquid waste treatment unit, or a public sewer system, except for discharges of graywater pursuant to 20.7.3.310 NMAC. No person shall discharge liquid waste or effluent into a cesspool or effluent disposal well. A privy may be used for the disposal of human excreta and toilet paper, but not for the disposal of other liquid wastes.~~

~~B. No person shall discharge effluent from a liquid waste treatment unit except through a permitted liquid waste disposal system or to a public sewer system. No person shall discharge effluent from a liquid waste treatment unit to an effluent disposal well.~~

~~C. No person shall install, have installed, modify or have modified, own, operate, or use an on-site liquid waste system which, by itself or in combination with other on-site liquid waste systems, may cause a hazard to public health or degrade any body of water.~~

~~D. On-site liquid waste systems installed or most recently modified prior to October 15, 1997 shall meet the less stringent of either:~~

~~(1) the requirements of this Part, or~~

~~(2) the corresponding requirements of the regulations in effect at the time of the initial installation or most recent modification of the system, whichever is later in time.~~

~~E. On-site liquid waste systems modified after October 15, 1997, shall meet the requirements of this Part or its successor provisions. Replacement components for on-site liquid waste systems shall be of materials prescribed by the New Mexico Design Standards as of the time of replacement.~~

~~F. On-site liquid waste systems installed after October 15, 1997 shall meet the requirements of this Part.~~

[10/15/97; 20.7.3.301 NMAC - Rn, 20 NMAC 7.3.III.301, Recompiled 11/27/01]]

**20.7.3.~~[302]~~301 STANDARDS; LOT SIZE REQUIREMENTS:**

A. The requirements of this section apply to all [on-site liquid waste]conventional treatment systems which [ultimately] discharge to the soil[, and to evapotranspiration systems]. Compliance with the requirements of this section shall be based on the total design flow for the lot. Water conservation devices or demonstrated actual flows shall not be used to reduce the requirements of this section. For the purposes of 20.7.3 NMAC, lot sizes shall be calculated to the nearest hundredth (0.01) acre.

[A.]B. The date of record for a lot shall be considered to be either:

(1) the date of legal recording in the county clerk's office or validation by other means associated with the most recent change in lot size or boundaries; or

(2) [January 31, 1990, for lots in subdivisions if the governmental body or bodies with jurisdiction therein granted final approval after July 31, 1987 and prior to February 1, 1990, and if a subdivision plat was recorded prior to July 1, 1992 in the county clerk's office for the county or counties in which the subdivision is located.]for those lots in subdivisions having received final approval from governments having jurisdiction therein prior to February 1, 1990, such date of record shall be two and one-half (2 ½) years from the date of final government approval or July 1, 1992, whichever occurs first.

[B. An on-site liquid waste system, including its replacement area, shall be located wholly on the same lot which is the site of the dwelling or commercial unit served by the on-site liquid waste system. A copy of the recorded deed or easement for the lot shall be submitted with the application for the on-site liquid waste system installation or modification petition.]

C. [On-site liquid waste systems on lots with record dates after February 1, 1990 shall not exceed the total design flow limitation given by the following formula: Total Design Flow (gallons per day) = Lot Size (acres) × 500 gpd.] On lots without an established on-site liquid waste system, the total design flow, utilizing conventional

treatment, shall not exceed 500 gallons per day per acre with a minimum lot size of 0.75 acre. For total design flows that exceed the allowable flow or for lots that do not meet the minimum lot size, the total nitrogen discharged to the lot shall be reduced in accordance with Subsection B of 20.7.3.603 NMAC.

[~~\_\_\_\_\_ D. \_\_\_\_\_~~ The minimum lot size required for an on-site liquid waste system on a lot with record date after February 1, 1990 is 0.75 acres.]

D. On-site liquid waste systems installed prior to the effective date 20.7.3 NMAC shall meet the lot size requirements of the regulations in effect at the time of their initial installation or most recent permitted modification.

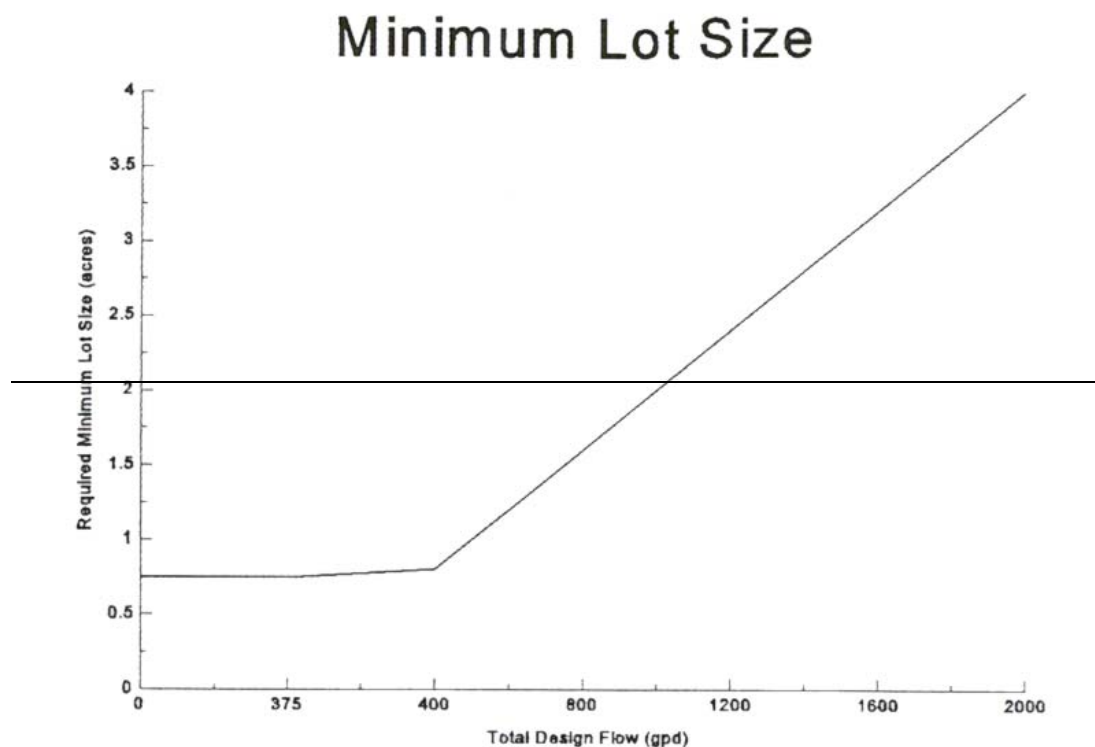
E. [The following] Table [302]301.1 lists the minimum lot sizes required for typical flow rates for conventional treatment systems [for lots with a date of record after February 1, 1990]:

**Table [302] 301.1**

TOTAL DESIGN FLOW (gallons per day)	MINIMUM LOT SIZE (acres)
375 or less	0.75
450	0.90
600	1.20
750	1.50
1125	2.25
1500	3.00
1875	3.75
2000	4.00

[F. \_\_\_\_\_ The following graph (Figure 302.2) illustrates the minimum lot sizes required for any flow rate from zero (0) to two thousand (2,000) gallons per day for lots with a date of record after February 1, 1990:

Figure 302.2



~~\_\_\_\_\_ G. \_\_\_\_\_~~ The total design flow of on-site liquid waste systems initially installed after February 1, 1990, on lots with record dates prior to February 1, 1990, without established on-site liquid waste systems shall not exceed:



\_\_\_\_\_ (1) ~~three hundred seventy five (375) gallons per day if the lot is smaller than 0.50 acres; or~~

\_\_\_\_\_ (2) ~~four hundred fifty (450) gallons per day, or the total design flow allowed by the formula in Subsection C of 20.7.3.302 NMAC, whichever is greater, if the lot is equal to or larger than 0.50 acres.~~

H. ~~On site liquid waste systems on lots with record dates prior to February 1, 1990, having any established on site liquid waste system shall not be modified to increase the total design flow to a flow that exceeds:~~

\_\_\_\_\_ (1) ~~three hundred seventy five (375) gallons per day if the lot is smaller than 0.50 acres; or~~

\_\_\_\_\_ (2) ~~four hundred fifty (450) gallons per day or the total design flow allowed by the formula in Subsection C of 20.7.3.302 NMAC, whichever is greater, if the lot is equal to or greater than 0.50 acres.]~~

[F.]E. The following Table [302.3]301.2 summarizes the minimum lot size[s] requirements, in acres, in effect prior to February 1, 1990 and is for informational purposes only:

Table [302.3] 301.2

		RECORD DATE							
		01/01/60 to 11/01/73	11/01/73 to 09/07/79	09/07/79 to 03/01/80	03/01/80 to 11/09/85	11/09/85 to 02/01/90			
		Minimum Lot Size	Soil Group **	Min. Lot Size	Total Design Flow (gpd)	Min. Lot Size	Total Design Flow (gpd)	Min. Lot Size	Total Design Flow (gpd)
O W F A F T - E S R I T E **	0.25***	A	0.50	0-1000	0.50	0-375	0.33	0-375	0.33
		B	0.75	1000- 1500	1.00	376- 1000	0.50	376- 750	0.50
		C	1.00	1500- 2000	1.25	1000- 1500	1.00	750- 1125	1.00
		D	****			1501- 2000	1.25	1126- 1500	1.25
								1501- 2000	1.75
O W N A T - S E R I T E **	0.50***	A	0.75	0-1000	0.75	0-1000	0.75	0-375	0.75
		B	1.00	1000- 1500	1.25	1000- 1500	1.25	376- 750	1.50
		C	1.25	1500- 2000	1.70	1501- 2000	1.70	750- 1125	2.00
		D	****					1126- 1500	2.75
								1501- 2000	3.50

(1) \* The maximum total design flow was 1,000 gpd for the lot sizes shown.

(2) \*\* See Subsection J of 20.7.3.[302]301 NMAC.

(3) \*\*\* These requirements applied to lots in subdivisions which were required at the time of subdivision to obtain state health department review and approval.

(4) \*\*\*\* No on-site liquid waste disposal to soil allowed.

(5) NOTE: Roadways were first excluded from figuring lot sizes as of 11/09/85.

J. The following table [302.4]301.3 lists the soil types for lot size determinations for the period November 1, 1973 to September 7, 1979: The minimum lot size required for the location of an individual liquid waste disposal system is determined by the most limiting soil group under which any soil characteristic falls.

Table [302.4]301.3

SOIL CHARACTERISTICS	A Slight Limitations	B Slight Limitations	C Moderate Limitations	D Severe Limitations
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1. SOIL DEPTH (depth to bedrock, in feet)	More than 6 and	More than 6 And	4 - 6 or	Less than 4 or
2. PERCOLATION RATE (rate of percolation of water into soil in minutes per inch)	0 - 15 and	16 - 30 and	31 - 60 or	More than 60 or
3. SEASONAL WATER TABLE (depth to shallowest water table during the year, in feet)	More than 12 and	More than 12 And	4 - 12 or	Less than 4 or
4. SLOPE (incline of the land surface, in percent)	0 - 8 and	0 - 8 and	8 - 25 or	More than 25 or
5. FLOODING POTENTIAL (overflow frequency, in years)	None	None	No more than 1 in 25	More than 1 in 25

[K. ~~\_\_\_\_\_~~ The distinction between "off site" and "on site" water, as used in the table in Subsection I of 20.7.3.302 NMAC, has changed with different versions of the regulations:

~~\_\_\_\_\_~~ (1) Prior to September 7, 1979, the distinction was between a public community water supply (off-site) and a private, on site well.

~~\_\_\_\_\_~~ (2) From September 7, 1979 to November 9, 1985, a "public water supply" (i.e., "off site") was defined as "a water supply for the provision to the public of piped water for human consumption if such system has at least fifteen (15) service connections or regularly services an average of twenty five (25) individuals at least sixty (60) days out of the year." A "private water supply" (i.e., "on site") was defined as "a non public water supply."

~~\_\_\_\_\_~~ (3) Between November 9, 1985 and February 1, 1990, the following definitions were in place:

~~\_\_\_\_\_~~ (a) "Off site water" means that the domestic water supply for the lot is from:

~~\_\_\_\_\_~~ (i) a private water supply source which is neither within the lot nor within one hundred (100) feet of the property line of the lot, or

~~\_\_\_\_\_~~ (ii) a public water supply source which is not within the lot;

~~\_\_\_\_\_~~ (b) "On site water" means that the domestic water supply for the lot is from:

~~\_\_\_\_\_~~ (i) a private water supply source which is within the lot or within one hundred (100) feet of the property line of the lot, or

~~\_\_\_\_\_~~ (ii) a public water supply source which is within the boundaries of the lot.

~~\_\_\_\_\_~~ L. When there is insufficient lot area or improper soil conditions for adequate on-site liquid waste disposal for the buildings or land use proposed, and the Department so finds, no on-site liquid waste system permit shall be issued until geological data, engineering data, test reports satisfactory to the Department, and a variance petition have been submitted and approved.]

[10/15/97; 20.7.3.302 NMAC - Rn, 20 NMAC 7.3.III.302, Recompiled 11/27/01]

### **20.7.3.~~[303]~~302 STANDARDS; SETBACK REQUIREMENTS:**

A. On-site liquid waste systems shall be located to meet setback distances, in feet, specified in the following Table ~~[303]~~302.1. Setback distances apply to any part of the on-site liquid waste system and its designated replacement area.

**Table ~~[303]~~302.1: Minimum setback and clearance requirements**

From:	To:	Building Sewer	Treatment Unit*	Disposal Field	Seepage Pit
Property lines		clear	5 ft.	5 ft.	8 ft.
Building or structure		2 ft.	5 ft.	8 ft.	8 ft.
Trees			10 ft.	10 ft.	10 ft.]
Distribution box	--	--	--	5 ft.	5 ft.
Disposal field	--	--	10 ft.*****	4 ft****	10 ft.
Seepage pit	--	--	5 ft.	5 ft.	12 ft.
Drinking water line:					
- private		1 ft.	10 ft.	10 ft.	10 ft.
- public		10 ft.	10 ft.	10 ft.	10 ft.

New material, deleted material

Drinking Water Source/Well:

- Private	50 ft.	50 ft.	100 ft.	100 ft.
- Public	50 ft.	100 ft.	200 ft.	200 ft.
Irrigation well	50 ft.	50 ft.	100 ft.	100 ft.
Lined canals	--	10 ft. **	10 ft. **	10 ft. **
Unlined canals, <u>drainage ditches</u>	--	15 ft. **	25 ft. **	25 ft. **
Arroyos	--	15 ft. **	25 ft. **	25 ft. **
Other watercourses,				
<u>Waters of the State</u>	--	50 ft.	100 ft.	100 ft.
<del>[Lakes</del>		<del>50 ft.</del>	<del>100 ft.</del>	<del>100 ft.]</del>
<u>Retention/detention area</u>	--	15 ft.	15 ft.	15 ft.
Seasonal high water table, bedrock and other impervious layers***	--	--	4 ft. to bottom of system	4 ft. to bottom of system

- (1) \* Applies to privy pits, enclosed systems, other liquid waste treatment units.
- (2) \*\* Plus depth of channel.
- (3) \*\*\* Unlined privy pits shall provide clearance of at least 4 feet.
- (4) \*\*\*\* Plus 2 feet for each additional foot of depth in excess of 1 foot below perforated pipe.
- (5) \*\*\*\*\* May be 5 feet when Schedule 40 PVC/DWV pipe is used.

B. Setback distances to watercourses, canals and arroyos shall be measured from the edge of the seasonal high water flow to the on-site liquid waste system component. Setback distances to artificially controlled lakes or reservoirs shall be measured from the closest projected shoreline at the maximum controlled water level. [10/15/97; 20.7.3.303 NMAC - Rn, 20 NMAC 7.3.III.303, Recompiled 11/27/01]

**20.7.3.~~304~~303 STANDARDS; CLEARANCE REQUIREMENTS:**

A. ~~Seasonal high ground water levels and seasonal high water flows shall be determined by the department either by direct observation, by the presence of mottling in the soil profile, or by reliance upon the findings of a [geohydrologist] qualified professional or upon published scientific material, well records, [the U. S. Soil Conservation Service, the U. S. Bureau of Reclamation,] or other sources acceptable to the department. The department may adjust the measured water table to compensate for factors such as season, drought, irrigation or flooding. Compliance with seasonal high ground water table and seasonal high water flow clearances in this section shall be based on the best-documented evidence available to the department at the time of installation or modification.~~

~~[A.]B. No conventional on-site liquid waste system shall discharge liquid waste into the soil where the vertical clearance from the bottom of the absorption area to seasonal high ground water table, impervious formation, or other limiting layer is less than four (4) feet of suitable soil. A reduction in this clearance may be allowed with appropriate advanced treatment or alternative disposal.~~

~~[B.]C. Unlined privy pits shall provide a clearance of no less than four (4) feet of suitable soil from the bottom of the excavation to the seasonal high ground water table, the seasonal high water flow, impervious formation or other limiting layer.~~

[10/15/97; 20.7.3.304 NMAC - Rn, 20 NMAC 7.3.III.304, Recompiled 11/27/01]

**~~20.7.3.305~~ STANDARDS; HOLDING TANK REQUIREMENTS:**

~~A. Non discharging holding tanks shall not be installed after February 1, 1990, to serve any design flow greater than three hundred seventy five (375) gallons per day, except to replace an existing holding tank. Total design flow on any property served by a holding tank installed after February 1, 1990, shall not exceed 375 gallons per day.~~

~~B. Holding tanks shall be constructed of the same materials and by the same procedures to the same standards as described in 20.7.3.402 NMAC, except that they shall have no discharge outlet.~~

~~\_\_\_\_\_ C. \_\_\_\_\_ All holding tank installations shall be tested on site for water tightness. Holding tanks shall be filled with water to the point of overflow at least twenty four (24) hours prior to inspection. There shall be no signs of external leakage or tank deformation at the time of inspection.~~

~~\_\_\_\_\_ D. \_\_\_\_\_ The minimum size of a holding tank shall be 1000 gallons or four (4) times the design flow, whichever is greater. For commercial units, the minimum tank size shall be five (5) times the design flow.~~

~~\_\_\_\_\_ E. \_\_\_\_\_ Holding tanks shall be located in an area readily accessible to a pump vehicle under all weather conditions and where accidental spillage during pumpage will not create a nuisance or a hazard to public health. Any spillage that may occur during tank pumpout shall be cleaned up immediately and the spill area disinfected with a sodium or calcium hypochlorite solution.~~

~~\_\_\_\_\_ F. \_\_\_\_\_ Holding tanks shall be protected against flotation under high ground water conditions by weight of tank (ballasting), earth anchors, or by surface or shallow installation.~~

~~\_\_\_\_\_ G. \_\_\_\_\_ Holding tanks shall be equipped with a visible and audible high water alarm system. The alarm shall be set to activate at 80% of the tank capacity.~~

~~\_\_\_\_\_ H. \_\_\_\_\_ The owner of a holding tank periodically shall have the tank pumped and the liquid waste (septage) properly disposed of in compliance with all applicable laws and regulations as needed to prevent discharge from the tank. Owners of holding tanks shall maintain records demonstrating sufficient pumping and proper disposal of septage from the units to prevent discharge. Copies of pumping and disposal records shall be retained by the owner for at least one year, and shall be made available to the department for inspection on request. The records shall be:~~

~~\_\_\_\_\_ (1) \_\_\_\_\_ kept on a form provided by the department if requested;~~

~~\_\_\_\_\_ (2) \_\_\_\_\_ accompanied by such other documentation as the department may reasonably require;~~

~~\_\_\_\_\_ (3) \_\_\_\_\_ signed by the lot owner or an authorized representative; and~~

~~\_\_\_\_\_ (4) \_\_\_\_\_ mailed on a semi annual basis, or a schedule otherwise determined by the department, to the~~

~~Department field office having jurisdiction.~~

~~\_\_\_\_\_ I. \_\_\_\_\_ No person shall install, operate, modify or maintain a holding tank which allows discharge to the soil.~~

~~\_\_\_\_\_ J. \_\_\_\_\_ The department may perform site inspections periodically to ensure that a holding tank does not discharge.~~

~~\_\_\_\_\_ K. \_\_\_\_\_ All dwellings or commercial units served by a holding tank shall be connected to a public or private wastewater treatment plant and the holding tank properly abandoned within 180 days after the installation within two hundred (200) feet of the lot of a collection line for the wastewater treatment plant.~~

~~[10/15/97; 20.7.3.305 NMAC – Rn, 20 NMAC 7.3.III.305, Recompiled 11/27/01]~~

**20.7.3.306 — STANDARDS; ALTERNATIVE SYSTEMS:** The department may issue a permit, on an individual basis, for the installation of an alternative on site liquid waste system, including a system employing new and innovative technology, if the permit applicant demonstrates that the proposed system, by itself or in combination with other on site liquid waste systems, will neither cause a hazard to public health nor degrade a body of water, and that the proposed system will provide a level of treatment at least as effective as that provided by on site liquid waste systems, except privies and holding tanks, that meet the requirements of this part and the New Mexico design standards.

\_\_\_\_\_ A. \_\_\_\_\_ In making this determination, the department may require the submission of plans bearing the seal of a registered professional engineer, or field and test data from the lot for which the alternative system is proposed or from conditions similar to those at the proposed lot, or such additional data as may be necessary to provide a reasonable basis for determining that the system will produce continuous and long range, trouble free results at the proposed lot.

\_\_\_\_\_ B. \_\_\_\_\_ If the department requires a field demonstration of a proposed alternative system utilizing new and innovative technology, the field demonstration shall meet the following requirements.

\_\_\_\_\_ (1) \_\_\_\_\_ Conditions for installation, operation, maintenance and monitoring at the proposed demonstration site shall first be determined by the department.

\_\_\_\_\_ (2) \_\_\_\_\_ On site testing and evaluation, as required by the department and paid for by the permit applicant or variance petitioner, shall be performed over a period of one (1) year from start up of the system.

\_\_\_\_\_ (3) \_\_\_\_\_ A contingency plan shall be included to provide liquid waste treatment that meets the requirements of this part if the demonstration results in a failed system.

~~[10/15/97; 20.7.3.306 NMAC – Rn, 20 NMAC 7.3.III.306, Recompiled 11/27/01]]~~

**20.7.3.304 — STANDARDS; PROHIBITIONS:**

A. No person shall introduce into an on-site liquid waste system motor oil, gasoline, paint, varnish, solvents, pesticides, fertilizer, livestock waste, or other materials of a composition or concentration not generally considered liquid waste as defined in 20.7.3 NMAC.

B. Wastes from recreational vehicle holding tanks and portable toilets shall not be discharged into a conventional on-site liquid waste system, except of noted in Subsection E of 20.7.3.809 NMAC.

C. Wastes from water softeners shall not be discharged into an on-site liquid waste system.

D. Liquid waste treatment additives shall not be used.

[10/15/97; 20.7.3.308 NMAC - Rn, 20 NMAC 7.3.III.308, Recompiled 11/27/01]

**20.7.3.305 STANDARDS; WASTE INTERCEPTORS:**

A. When liquid wastes are discharged containing excessive amounts of grease, garbage, flammable wastes, sand, or other ingredients which may affect the operation of an onsite liquid waste system, an interceptor for such wastes shall be installed in line prior to the liquid waste treatment unit.

B. Installation of such interceptors shall comply with chapter 7 of the uniform plumbing code as adopted by the construction industries division.

C. Interceptors shall be installed in locations that meet minimum setback and clearance requirements of Table 303.1.

[10/15/97; 20.7.3.407 NMAC - Rn, 20 NMAC 7.3.IV.407, 3/1/04]

**20.7.3.~~307~~306 STANDARDS; SEPTAGE:** ~~[Septage shall disposed of so that it will]~~ Disposal of septage shall not cause a hazard to public health ~~[and so that it will not]~~ nor degrade a body of water. ~~[Disposal of septage may also be subject to the New Mexico water quality control commission regulations and other federal, state and local requirements.]~~ Transport and disposal of septage shall be in conformance with applicable federal, state, and local regulations.

[10/15/97; 20.7.3.307 NMAC - Rn, 20 NMAC 7.3.III.307, Recompiled 11/27/01]

**~~20.7.3.308~~ STANDARDS; OPERATION REQUIREMENTS:**

~~A. No person shall introduce motor oil, gasoline, paint, varnish, solvents, pesticides, fertilizer or other materials of a composition or concentration not generally considered liquid waste to an on-site liquid waste system.~~

~~B. No person shall introduce any chemical defined by the New Mexico water quality control commission as a toxic pollutant into an on-site liquid waste system.~~

~~[10/15/97; 20.7.3.308 NMAC - Rn, 20 NMAC 7.3.III.308, Recompiled 11/27/01]]~~

**~~20.7.3.309~~ STANDARDS; MAINTENANCE OF ON-SITE LIQUID WASTE SYSTEMS**

~~A. The owner of an on-site liquid waste system shall operate and maintain the system according to the recommendations of the manufacturer or installer of the system.~~

~~B. Liquid waste treatment additives shall not be used as a means to reduce the frequency of proper maintenance and removal of septage from a treatment unit.~~

~~[10/15/97; 20.7.3.309 NMAC - Rn, 20 NMAC 7.3.III.309, Recompiled 11/27/01]]~~

**20.7.3.310 STANDARDS; GRAYWATER DISCHARGES:** graywater discharge of less than 250 gallons per day of private residential graywater originating from a residence for the resident's household flower gardening, composting or landscaping irrigation shall be allowed if;

~~A. a constructed graywater distribution system provides for overflow into the sewer system or on-site wastewater treatment and disposal system;~~

~~B. a graywater storage tank is covered to restrict access and to eliminate habitat for mosquitos or other vectors;~~

~~C. a graywater system is sited outside of a floodway;~~

~~D. graywater is vertically separated at least five feet above the ground water table;~~

~~E. graywater pressure piping is clearly identified as a nonpotable water conduit;~~

~~F. graywater is used on the site where it is generated and does not run off the property lines;~~

~~G. graywater is discharged in a manner that minimizes the potential for contact with people or domestic pets;~~

~~H. ponding is prohibited, discharge of graywater is managed to minimize standing water on the surface and to ensure that the hydraulic capacity of the soil is not exceeded;~~

~~I. graywater is not sprayed;~~



~~\_\_\_\_\_ J. \_\_\_\_\_ graywater is not discharged to a watercourse;~~  
~~\_\_\_\_\_ K. \_\_\_\_\_ graywater use within municipalities or counties complies with all applicable municipal or county ordinances enacted pursuant to Chapter 3, Article 53 NMSA 1978;~~  
~~\_\_\_\_\_ L. \_\_\_\_\_ graywater is not stored longer than 24 hours before being discharged;~~  
~~\_\_\_\_\_ M. \_\_\_\_\_ graywater use for purposes other than irrigation or composting is prohibited, unless a permit for such use is issued by the department;~~  
~~\_\_\_\_\_ N. \_\_\_\_\_ graywater is not used to irrigate food plants except for fruit and nut trees;~~  
~~\_\_\_\_\_ O. \_\_\_\_\_ graywater is discharged to a mulched surface area or to an underground irrigation system;~~  
~~\_\_\_\_\_ P. \_\_\_\_\_ graywater is not discharged closer than 100 feet to a watercourse or private domestic well, or closer than 200 feet to a public water supply well;~~  
~~\_\_\_\_\_ Q. \_\_\_\_\_ graywater does not create a public nuisance;~~  
~~\_\_\_\_\_ R. \_\_\_\_\_ for residential units using an on-site liquid waste system for blackwater treatment and disposal, the use of a graywater system does not change the design, capacity, or absorption area requirements for the on-site liquid waste system at the residential unit, and the on-site liquid waste system is designed and sized to handle the combined blackwater and graywater flow if the graywater system fails or is not fully used; and,~~  
~~\_\_\_\_\_ S. \_\_\_\_\_ graywater does not contain hazardous chemicals derived from activities such as cleaning car parts, washing greasy or oily rags, or disposing of waste solutions from home photo labs or similar hobbyist or home occupational activities.~~  
~~[20.7.3.310 NMAC - N, 3/1/04]~~

**20.7.3.307 STANDARDS; ABANDONED SEWERS AND ON-SITE LIQUID WASTE SYSTEMS:**

A. Every abandoned building sewer, or part thereof, shall be plugged or capped within five (5) feet of the property line using a cap or plug prescribed by the uniform plumbing code.

B. Every cesspool, holding tank, septic tank, seepage pit or other liquid waste treatment unit which has been abandoned or has otherwise been discontinued from further use or to which no waste or building sewer from a plumbing fixture is connected, shall have the liquid waste pumped there from and properly disposed. The bottom of the unit shall be opened or ruptured, or the entire unit collapsed so as to prevent the unit from retaining water. The unit shall be completely filled with earth, sand, gravel, concrete or other approved material.

C. The top cover or arch over the cesspool, holding tank, septic tank, seepage pit or other liquid waste treatment unit shall be removed before filling and the filling shall not extend above the top of the vertical portions of the sidewalls or above the level of any outlet pipe until inspection or authorization by the department. After such inspection or authorization, the cesspool, holding tank, septic tank, seepage pit or other liquid waste treatment unit shall be filled to the level of the top of the ground.

D. Where on-site treatment systems are abandoned consequent to connecting any premises with a public sewer, the permittee making the connection shall fill all abandoned treatment units as required by the department within 30 days from the time of connection.

~~E. All residential and commercial units utilizing an on-site liquid waste system shall connect to a public sewer if required by the local authority having jurisdiction.~~

~~[10/15/97; 20.7.3.410 NMAC - Rn, 20 NMAC.7.3.IV.410, Recompiled 11/27/01]~~

**20.7.3.~~344~~308 through 20.7.3.400 [RESERVED]**

**20.7.3.401 ~~[DESIGN; GENERAL]~~PERMITTING; GENERAL REQUIREMENTS**

A. No person shall install or have installed a new on-site liquid waste system or modify or have modified an existing on-site liquid waste system, unless that person obtains a permit issued by the department prior to construction of such installation or modification. Failure to obtain the required permit may result in the initiation of enforcement actions by the department.

B. No person shall construct or modify a residential or commercial unit on, or transport a residential or commercial unit onto, a lot for which an on-site liquid waste system is required unless the department has issued an on-site liquid waste system permit prior to such construction, modification, or transportation.

C. No person shall construct, install, or modify an on-site liquid waste system unless that person holds a valid and appropriate classification of contractors license issued by the New Mexico construction industries division and shall comply with 20.7.3.904 NMAC, except that a homeowner may install or modify permitted septic tanks and conventional trench or bed disposal fields after demonstrating competency pursuant to 20.7.3.904 NMAC and obtaining a permit. The homeowner shall not compensate any person to perform any phase of the system construction. Obtaining

a permit from the department for the installation or modification, of an on-site liquid waste system does not relieve any person from the responsibility of obtaining any other approval, license or permit required by state, city or county regulations or ordinances or other requirements of state or federal laws.

D. A permit is not required for graywater discharges or for systems designed for the discharge of graywater that meet the requirements of 20.7.3.810 NMAC.

E. Any person seeking a permit shall do so by submitting an application to the field office of the department having jurisdiction for the area where the system is to be installed or modified. The application shall be:

(1) made on a form provided by the department;

(2) accompanied by the recorded deed or other recorded description and such other relevant information as the department may reasonably require to establish lot size, boundaries, date of record and ownership; and,

(3) signed by the applicant or their authorized representative.

F. The department shall require complete and accurate information before a permit is issued for an on-site liquid waste system.

G. The department shall deny the application if the proposed system will not meet the requirements of 20.7.3 NMAC.

H. The department shall maintain a file of all permits issued and applications denied. The file shall be open for public inspection.

I. All systems shall be installed, operated and maintained in accordance with the permit and applicable regulations.

J. Unpermitted systems may be permitted;

(1) if upon inspection, the system is found to be installed or most recently modified in accordance with the regulations in effect at the time of the original installation or most recent modification and;

(2) the installation or most recent modification occurred prior to January 1, 2003; and,

(3) systems installed after January 1, 2003 shall be charged the permit fee plus the administrative penalty and does not relieve the owner or installer from legal actions, including but not limited to assessing penalties under the Environmental Improvement Act [Chapter 74, Article 1 NMSA 1978].

#### **20.7.3.402 PERMITTING; CONVENTIONAL TREATMENT AND DISPOSAL SYSTEMS**

A. For liquid waste systems utilizing conventional treatment and conventional disposal, the department may require the following information to be included with the application.

(1) A detailed site plan, completely dimensioned, showing direction and approximate slope of surface, location of all present or proposed retaining walls, arroyos, canals, irrigation or drainage channels, water supply lines, wells or other water sources, other on-site liquid waste systems, paved areas, roadways, structures, and location of the proposed liquid waste system and replacement area with relation to lot lines and structures, and to all sources of water supply located within two-hundred (200) feet.

(2) Sufficient details of construction, materials, and components necessary to assure compliance with the requirements of 20.7.3 NMAC, including a full description of the complete installation, quality, kind and grade of all materials, equipment, construction, and methods of assembly and installation.

(3) A detailed log of soil formations and ground water level as determined by soil borings or a test hole(s) dug in close proximity to any proposed seepage pit or disposal field.

(4) A set of floor plans or verification of the total flow for the structure(s) served by the liquid waste system; or,

(5) Any additional information that may be necessary to demonstrate that the permit is protective of public health, or the environment.

B. If the department finds an on-site liquid waste system is proposed in an area of concern or that specific requirements in addition to or more stringent than those specifically provided in 20.7.3 NMAC are necessary to prevent a hazard to public health or the degradation of a body of water, the Department shall issue permit conditions with more stringent requirements or additional specific requirements. Such additional or more stringent requirements may apply to system design, siting, construction, inspection, operation and monitoring.

C. The department shall deny the permit if the proposed system will not meet the requirements of 20.7.3 NMAC.

D. The department shall maintain a file of all permits issued and denied. The file shall be open for public inspection.

E. The installation or modification of an on-site liquid waste system shall be in accordance with the permit and all regulatory requirements of 20.7.3 NMAC. Any change from the permitted installation or

modification, including a change of contractor, must receive Department approval prior to implementation. An amendment to the permit shall be submitted within 7 days of the completion of the installation.

F. No person shall operate or use an on-site liquid waste system until the department has granted final approval of the system after installation or modification of the system is completed. No person shall occupy a newly constructed or transported dwelling for which an on-site liquid waste system is required until the department has granted such final approval, and, if applicable, until the governmental body with authority to regulate construction has granted an occupancy permit. The department shall not grant final approval if the system as installed or modified does not meet the requirements of 20.7.3 NMAC.

G. The department may cancel a permit if the installation or modification of the on-site liquid waste system has not been completed within one (1) year after issuance, or if the department determines that material information in the application is false, incomplete, or inaccurate and that the correct information would have resulted in the department denying the original application. If a permit is canceled, the department shall notify the permittee of the decision in writing and the reason for cancellation and appropriate regulations cited.

H. Except as otherwise provided in Subsection I of 20.7.3.402 NMAC, the Department shall, within ten (10) working days after receipt of the completed application, grant the permit, grant the permit subject to conditions, or deny the permit and shall notify the applicant of the action taken. Within five working days, the department shall determine if a permit application is administratively complete. The department shall notify the permittee if the application is administratively incomplete. This paragraph does not apply if inaccurate information is provided in the application.

I. If the Department's initial review of the application indicates that the imposition of more stringent requirements may be necessary pursuant to Subsection D of 20.7.3.201 NMAC or Subsection B of 20.7.3.402 NMAC, the department may extend the time for the review of the application until twenty (20) working days after receipt of the completed application provided that the department shall notify the applicant of such extension within ten (10) working days after receipt of the completed application.

J. When the permit is granted subject to conditions or denied, the reason for the action shall refer to the appropriate regulation(s) and be given in writing.

#### **20.7.3.403 PERMITTING; ADVANCED TREATMENT OR ALTERNATIVE DISPOSAL**

A. An application for a permit proposing advanced treatment (with conventional or alternative disposal) or alternative disposal (with conventional treatment) may be submitted.

B. Applications shall include the information required for a conventional treatment or disposal system, and:

(1) For applications proposing advanced treatment with either conventional or alternative disposal, the applicant shall demonstrate that the system has been approved by the department and shall include operation and maintenance information, monitoring plans, and maintenance agreements. The applicant must demonstrate the applicability and effectiveness of the technology on the site where it is to be used. A copy of a signed maintenance contract between the property owner and a certified maintenance service provider shall be attached to the application. The property owner shall have a maintenance contract in effect for the duration of the permit. The property owner shall provide to the department copies of all maintenance contracts required to be in effect within 30 days of contract issuance or renewal;

(2) Notice of maintenance requirements must be recorded with the property deed; and,

(3) For applications proposing alternative disposal with conventional treatment, the applicant shall include details of design, sizing, construction, and operation. Such disposal systems include, but are not limited to mounds, evapotranspiration, seepage pits, pressure dosing systems, alternating leach fields, non-discharging constructed wetlands, non-gravity systems, and approved surface applications.

C. For applications proposing advanced treatment or alternative disposal, the department shall, within twenty (20) working days after receipt of the completed application, grant the permit, grant the permit subject to conditions, or deny the permit and shall notify the applicant of the action taken.

D. When the permit is granted subject to conditions or the application denied, the reason for the action shall refer to the appropriate regulation and be given in writing.

#### **20.7.3.404 PERMITTING; EXPERIMENTAL SYSTEMS**

A. The department may issue a permit, on an individual basis, for the installation of an experimental on-site liquid waste system if the permit applicant demonstrates that the proposed system, by itself or in combination with other on-site liquid waste systems, will neither cause a hazard to public health nor degrade a body of water, and that the

proposed system will provide a level of treatment at least as effective as that provided by on-site liquid waste systems, except privies and holding tanks, that meet the requirements of 20.7.3 NMAC.

B. Prior to the approval of a permit for an experimental on-site liquid waste system, the experimental system shall be reviewed by the technical advisory committee pursuant to Section 20.7.3.905 NMAC.

C. A field demonstration, which meets the following requirements, shall be required for a proposed experimental system:

(1) conditions for installation, operation, maintenance, and monitoring at the proposed demonstration site shall be reviewed and approved by the department;

(2) on-site testing and evaluation, as required by the department and paid for by the permit applicant, shall be performed for a period of at least two (2) years from start-up of the system;

(3) a contingency plan shall be included to provide liquid waste treatment that meets the requirements of 20.7.3 NMAC if the experimental system fails to meet the requirements of 20.7.3 NMAC; and,

(4) a copy of signed maintenance contract between the property owners and a certified maintenance service provider shall be attached. The property owner shall have a maintenance contract in effect for the duration of the permit. The property owner shall provide to the department copies of all maintenance contracts required to be in effect within 30 days of contract issuance or renewal.

#### **20.7.3.405 PERMITTING; VARIANCES**

A. Any person seeking a variance from the requirements contained in 20.7.3 NMAC shall do so by filing a written petition with the field office of the department having jurisdiction for the area where the system is to be installed.

B. The petition shall be:

(1) made on a form provided by the department;

(2) accompanied by relevant documents or materials which the petitioner believes would support the petition;

(3) accompanied by documentation, including addresses, demonstrating that all owners of adjacent property sharing a common border with the lot for which the variance is sought have been notified of the nature of the variance petition, the date of submission of the petition to the department, the address of the department field office to which the petition is being submitted, and the time frame for department action as provided in Subsection C of 20.7.3.405 NMAC below, unless adjacent properties are more than one thousand (1,000) feet from the on-site liquid waste system for which the variance is sought;

(4) accompanied by such other relevant information as the department may reasonably require; and,

(5) signed by the petitioner or an authorized representative.

C. The department shall, after a minimum of ten (10) but not more than twenty (20) working days following receipt of the completed petition, grant the variance, grant the variance subject to conditions, or deny the variance and shall so notify the applicant and any other person making a written submission concerning the petition. The reason for the department's action shall be provided in writing and the appropriate regulations cited.

D. The department shall deny the variance petition unless the petitioner establishes by clear and convincing evidence that:

(1) the proposed on-site liquid waste system will, by itself or in combination with other on-site liquid waste systems, or other discharges subject to 20.6.2.3000 through 20.6.2.3114 NMAC, neither cause a hazard to public health or degrade any body of water; and,

(2) granting the variance will result in public health and environmental protection equal to or greater than the minimum protection provided by the varied requirement.

E. The department shall maintain a file of all variances granted and denied. The file shall be open for public inspection.

[10-15-97; 20.7.3.15 NMAC - Rp 20NMAC7.3.202, x/x/2003]

#### **20.7.3.406 PERMITTING; APPEALS**

A. Any affected person who is dissatisfied with action taken by the department on a permit application or variance petition may appeal to the secretary. The request must be made in writing to the secretary within fifteen (15) working days after notice of the department's action has been issued. Unless an appeal is received by the secretary within fifteen (15) working days after notice to the applicant or petitioner of the department's action the decision of the department shall be final.

B. If an appeal is received within the fifteen (15) working day time limit, the secretary shall hold a hearing within fifteen (15) working days after receipt of the request. The secretary shall notify the person who

requested the hearing of the date, time, and place of the hearing by certified mail. If the appeal is on a variance petition, the secretary shall also notify all persons involved under Paragraph (3) of Subsection B of 20.7.3.405 NMAC of the hearing date, time and place of the hearing by certified mail.

C. In the appeal hearing, the burden of proof is on the person who requested the hearing. Where the department requires standards more stringent than those provided in 20.7.3 NMAC, the burden of proof of the necessity for the more stringent standards shall be upon the department.

D. Appeal hearings shall be held at a place designated by the secretary in the area where the proposed on-site liquid waste system is to be located, unless other mutually agreed upon arrangements are made. The secretary may designate a person to conduct the hearing and make a final decision or make recommendations for a final decision. The secretary's hearing notice shall indicate who will conduct the hearing and make the final decision.

E. Upon request, the hearing shall be recorded. The person who requests the recording shall pay recording costs.

F. In appeal hearings, the rules governing civil procedure and evidence in district court do not apply. Hearings shall be conducted so that all relevant views, arguments and testimony are amply and fairly presented without undue repetition. The secretary shall allow department staff and the hearing requestor to call and examine witnesses, to submit written and oral evidence and arguments, to introduce exhibits, and to cross-examine persons who testify. All testimony shall be taken under oath. At the end of the hearing, the secretary shall decide and announce if the hearing record will remain open and for how long and for what reason it will be left open.

G. Based upon the evidence presented at the hearing, the secretary shall sustain, modify or reverse the action of the department. The secretary's decision shall be by written order within fifteen (15) working days following the close of the hearing record. The decision shall state the reasons therefore and shall be sent by certified mail to the hearing requestor and any other affected person who requests notice. Appeals from the secretary's final decision are by Rule 1-075 NMRA 1997.

[10/15/97; 20.7.3.203 NMAC - Rn, 20 NMAC 7.3.II.203, Recompiled 11/27/01]]

[10/15/97; 20.7.3.401 NMAC - Rn, 20 NMAC 7.3.IV.401, Recompiled 11/27/01]

### **20.7.3.407 through 20.7.3.500 [RESERVED]**

#### **[20.7.3.402 — DESIGN; LIQUID WASTE TANK DESIGN AND CONSTRUCTION]**

#### **20.7.3.501 DESIGN: LIQUID WASTE TREATMENT UNITS; GENERAL**

A. ~~[General]~~ Plans for all treatment unit designs shall be submitted to the department for approval, registration and certification. Such plans shall show all dimensions, reinforcement, structural calculations and such other pertinent data as may be required by the department.

B. All treatment units and tanks, regardless of material or method of construction and unless otherwise specified in 20.7.3 NMAC, shall:

- (1) ~~[be watertight;~~
- ~~(2) be installed level on undisturbed or compacted soil;~~
- ~~(3) be designed and constructed to withstand all potential lateral earth pressures under saturated soil conditions with the tank empty;~~
- (4) have a minimum live load at the surface of 300 pounds per square foot with twelve (12) inches of cover unless heavier loads are expected;
- ~~(5) not be subject to excessive corrosion or decay;~~
- (6) have the manufacturer's name, New Mexico registration number, year of construction, ~~[model number]~~ and tank capacity in gallons permanently displayed on the tank above the outlet pipe;
- (5) be watertight;
- (7) not be constructed or manufactured on site, in the ground, when saturated soil conditions during construction are closer than three (3) inches to the bottom of the excavation;
- (8) be protected against flotation under high ground water conditions;
- (9) be installed so that they are easily locatable and accessible; and
- (10) be approved by the international association of plumbing and mechanical officials (IAPMO) or meet IAPMO minimum standards as demonstrated to the department by approved laboratory testing and certification by a ~~[registered]~~ professional engineer.

C. Treatment units may be constructed of the following materials:

- (1) precast reinforced concrete;



- (2) poured-in-place concrete;
- (3) fiberglass;
- (4) polyethylene; or
- (5) other materials as approved in writing by the department.
- D. Metal, wooden, concrete block and homeowner built tanks are prohibited.
- E. A secure lid shall consist of one or more of the following:
  - (1) a padlock;
  - (2) a twist lock cover requiring special tools for removal;
  - (3) covers weighing 58 pounds or more, net weight;
  - (4) a hinge and hasp mechanism which uses stainless steel or other corrosion resistant fasteners to fasten the hinge and hasp to the lid and tank for fiberglass, metal or plastic lids; or
  - (5) other mechanisms approved by the department.
- F. Wherever vehicular traffic is anticipated to cross over the liquid waste treatment unit, pump station, or pump chamber, the unit shall be designed by a professional engineer to withstand the anticipated traffic loading.
- G. All solid wall pipe connections, fittings and penetrations shall be watertight.
- H. Each tank shall be structurally designed to withstand all anticipated earth or other loads. All septic tank covers shall be capable of supporting an earth load of not less than four hundred (400) pounds per square foot when the maximum fill coverage does not exceed three (3) feet.
- I. Fiberglass or reinforced plastic treatment units shall be certified to IAPMO standards.
  - (1) Each access and inspection hole cover shall have approved fasteners not subject to deterioration by liquid or gases normally present in septic tank systems to assure that the covers will remain in place. All covers shall overlap the hole by a minimum of two (2) inches in all directions.
  - (2) Each tank shall be free from visual defects such as foreign inclusions, dry spots, air bubbles, pimples and delamination. The inner and outer surfaces shall have a smooth, continuous finish with no exposed fibers. Both the inner and outer surfaces shall have a continuous resin rich surface and no fibers shall be exposed either directly from cracks, porosity or holes, or indirectly through bubbles that may break and expose fibers.
  - (3) The completed tank shall be watertight.
  - (4) There shall be no permanent distortion or failure when tanks are sealed and evacuated to a vacuum of V inches of mercury, where V is equal to the maximum depth of earth cover in feet recommended by the manufacturer but not less than three (3) feet.
  - (5) There shall be no permanent distortion or failure when tanks are statically loaded in accordance with the following procedure: embed the top of an empty tank in dry sand to a depth not exceeding four (4) inches below ground level. The tank shall be oriented as for service. Determine the maximum cross-section area and load the top segment of the tank with sand bags to a total weight in pounds equal to: 420 x A, where A is the plan cross-section in square feet. The bags should be distributed as uniformly as possible over the tank surface above the plane of maximum area, with the exception of the manhole, which shall be left unloaded.
  - (6) Fiberglass or plastic tanks shall be installed according to the manufacturer's instructions. A copy of the manufacturer's installation instructions shall be available for inspection by the department at the installation site.
- J. Concrete liquid waste treatment units.
  - (1) Minimum concrete thickness.
    - (a) Walls: Two and one-half (2 1/2) inches in thickness.
    - (b) Floors: Three (3) inches in thickness.
    - (c) Covers: Three (3) inches in thickness.
    - (d) Unreinforced concrete shall be at least five (5) inches thick.
  - (2) Floors must be an integral part of the tank.
  - (3) Where sections are used, tongue and groove joints or keyways shall be used and shall be sealed with an approved sealer and shall be watertight.
  - (4) Poured in place tanks must be designed and certified by a professional engineer.
  - (5) All concrete liquid waste treatment units, except those approved for use utilizing concrete meeting type V specifications, shall be protected from corrosion by coating internally with an approved bituminous coating or by other acceptable means. The coating shall cover all exposed concrete and shall extend to at least 6 inches below the waterline.
  - (6) Treatment unit construction materials shall meet the following minimum specifications:
    - (a) concrete strength - 3500 psi @ 28 days, density 140 PCF;

- ~~(b) cement Portland type II or V per ASTM C150-81;~~
- ~~(c) admixtures per ASTM C233-82; and,~~
- ~~(d) reinforcing per ASTM A615 for wire fabric, grade 40/60 R'd or equivalent.~~
- (7) Be installed level on undisturbed or compacted soil.

~~[B. The minimum liquid capacity of a septic tank shall be determined using the following Table 402.1 based on the number of bedrooms, or the number of plumbing fixture units, whichever yields a larger minimum tank capacity, or using the formulae in Paragraphs (1) and (2) of Subsection B of 20.7.3.402 NMAC below based on the estimated liquid waste design flow rate. \* Extra fixture units over 100, 25 gallons per fixture unit; fixture units less than 100, approximately equal to 31.1 gallons per fixture unit.~~

~~Table 402.1~~

~~Capacity of Septic Tanks~~

<del>Single family dwellings, number of bedrooms</del>	<del>Other uses, maximum fixture units*</del>	<del>Minimum septic tank capacity in gallons served</del>
<del>1</del>	<del>110</del>	<del>750</del>
<del>2 - 3</del>	<del>10</del>	<del>1000</del>
<del>4</del>	<del>15</del>	<del>1200</del>
<del>5 - 6</del>	<del>20</del>	<del>1500</del>
<del>7 - 9</del>	<del>27</del>	<del>2000</del>
<del></del>	<del>29</del>	<del>2250</del>
<del></del>	<del>32</del>	<del>2500</del>
<del></del>	<del>35</del>	<del>2750</del>
<del></del>	<del>39</del>	<del>3000</del>
<del></del>	<del>42</del>	<del>3250</del>
<del></del>	<del>45</del>	<del>3500</del>

~~(1) Flows 1500 gpd or less — 2.5 X design flow = tank capacity.~~

~~(2) Flows greater than 1500 gpd — 0.75 X design flow + 1125 = tank capacity.~~

~~(3) The design flow rates for the commercial unit usage set forth in the following Table 402.2 shall be used for determining liquid capacities for on-site liquid waste systems.~~

~~Table 402.2~~

~~Established liquid waste design flow rates:~~

<del>TYPE OF OCCUPANCY</del>	<del>(GPD)</del>
<del>1. Airport</del>	<del>20 per employee</del>
<del></del>	<del>5 per passenger</del>
<del>2. Bowling alleys</del>	<del>75 per lane</del>
<del>(snack bar only)</del>	
<del>3. Bed and Breakfast</del>	<del>150 first bedroom</del>
<del></del>	<del>100 each additional</del>
<del></del>	<del>bedroom</del>
<del>4. Camps:</del>	
<del>campground with central</del>	
<del>comfort station</del>	<del>35 per person</del>
<del>with flush toilets,</del>	
<del>no showers</del>	<del>25 per person</del>
<del>day camps (no meals</del>	
<del>served)</del>	<del>15 per person</del>
<del>summer and seasonal</del>	<del>50 per person</del>

5. Churches (sanctuary)	5 per seat
— with kitchen waste	7 per seat
6. Dance hall	5 per person
7. Factories:	
— no showers	25 per employee
with showers	35 per employee
cafeteria, add	5 per employee
8. Hotels, motels, lodges	60 per bed
— lounges and restaurants calculated separately	
9. Institutions (resident)	75 per person
— nursing homes	125 per person
rest homes	125 per person
10. Laundries, self service	50 per wash cycle
— (minimum 10 hours/day)	per manufacturer's specifications
commercial	
11. Offices	20 per employee
12. Parks:	
— picnic park — toilets only	20 per parking space
recreation vehicles without water hookup	75 per space
with water and sewer hookup	100 per space
13. Restaurants — cafeterias	20 per employee
— toilet	7 per customer
kitchen waste	6 per meal
for garbage disposal add	1 per meal
for cocktail lounge add	2 per customer
kitchen waste—	
disposable service	2 per meal
14. Schools — staff and office	20 per person
— Elementary and Day care	15 per student
intermediate and high	20 per student
boarding, total waste	100 per person
gym and showers, add	5 per student
with cafeteria, add	3 per student
15. Service stations and	400 per toilet
— convenience store	
— uni-sex restrooms	800 per Toilet
16. Stores	20 per employee
— public restrooms	1 per 10 sq. ft. floor
17. Swimming pools, public	10 per person

18. ~~Theaters, auditoriums~~ 5 per seat  
~~drive ins~~ 10 per space

~~Liquid waste flows determined by meters or other measuring devices shall be multiplied by 1.5 safety factor for peak design flow.~~

### **20.7.3.502 DESIGN; CONVENTIONAL TREATMENT UNITS; CONSTRUCTION STANDARDS**

~~[C. Plans for all septic tank design shall be submitted to the department for approval, registration and certification. Such plans shall show all dimensions, reinforcement, structural calculations, and such other pertinent data as may be required by the department. All tanks must be IAPMO approved or meet minimum IAPMO standards as demonstrated to the department by approved laboratory testing and certification by a registered professional engineer. minimum standards for non IAPMO approved tanks include but are not limited to:]~~

~~[(1)]A. All [Septic tanks] conventional treatment units, regardless of material or method of construction and unless otherwise specified in this part shall be designed to produce a clarified effluent and shall provide adequate space for sludge and scum accumulations based on a minimum hydraulic retention time of 24 hours at maximum sludge depth and scum accumulation.~~

~~[(2)] Septic tanks shall be constructed of solid durable materials not subject to excessive corrosion or decay and shall be watertight.~~

- ~~(a) Septic tanks may be constructed of the following materials:~~
- ~~(i) precast reinforced concrete;~~
  - ~~(ii) poured in place concrete;~~
  - ~~(iii) fiberglass;~~
  - ~~(iv) polyethylene; or~~
  - ~~(v) other materials as approved in writing by the department.~~
- ~~(b) Metal, wooden, and homeowner built tanks are prohibited.]~~

~~[(3)]B. Septic tanks shall have a minimum of two (2) compartments. The inlet compartment of a septic tank shall be two-thirds (2/3) of the total liquid capacity of the tank, but not less than five-hundred (500) gallons liquid capacity, and shall be at least three (3) feet in width and five (5) feet in length. Liquid depth shall be not less than two (2) feet and six (6) inches nor more than six (6) feet. The second compartment of a septic tank shall have a liquid capacity of one-third (1/3) of the total capacity of such tank. In septic tanks having over fifteen hundred (1500) gallons capacity, the second compartment may not be less than [five (5)] three (3) feet in length.~~

~~C. Multiple tanks installed in series may be allowed with Department approval provided the total tank volume is at least 2.5 times the total design flow. Minimum tank sizes are as follows:~~

- ~~(1) for flows up to 1000 gpd, the capacity of each tank must be at a minimum 900 gallons; and~~  
~~(2) for flows between 1000 and 2000 gpd, the capacity of each tank must be a minimum of 1200 gallons.~~

~~[(4)]D. Access to each septic tank shall be provided by at least two [(2) manholes] access openings, each of which shall be at least twenty (20) inches in minimum dimension[~~, or by an equivalent manhole slab~~]. One [(1) manhole] access opening shall be placed over the inlet and one [(1) manhole] access opening shall be placed over the outlet. Whenever a first compartment exceeds twelve (12) feet in length, an additional [manhole] access opening shall be provided over the baffle wall. Each [manhole] access opening shall be extended to [within one foot of] the surface of the ground with a secure lid. These extensions shall be twenty-four (24) inches in diameter for depths of 0-3 feet and for depths greater than 3 feet shall be at least 30 inches in diameter with an approved lid that conforms to [Paragraph (10) of Subsection C of 20.7.3.402 NMAC] Subsection E of 20.7.3.501 NMAC. If the extensions are made of concrete, they shall be coated with a "foundation grade" bituminous coating approved by the department. "Wet-or-dry" coatings and mastics, or other water-based materials are not acceptable. Materials for the extensions shall be approved by the department.~~

~~[(5)]E. The inlet and outlet pipe openings shall be not less in size than the connecting sewer pipe and shall have a watertight seal approved by the Department. The vertical leg of round inlet and outlet fittings shall not be less in size than the connecting sewer pipe nor less than four (4) inches. A baffle type fitting shall have the equivalent cross-sectional area of the connecting sewer pipe and not less than a four (4) inch horizontal dimension when measured at the inlet and outlet pipe inverts.~~

~~[(6)]F. The inlet and outlet pipe or baffle shall extend at least four (4) inches above and at least twelve (12) inches below the water surface. The invert of the inlet pipe shall be at a level not less than two (2) inches above the invert of the outlet pipe. Inlet and outlet pipe or baffles shall be, at a minimum, [of cast iron,] schedule 40 PVC, ABS or cast-in-place concrete. Such approved pipe shall be SDR 35 or better.~~

~~[(7)]~~G. Inlet and outlet pipe fittings or baffles, and compartment partitions, shall have a free vent area equal to the required cross-sectional area of the building sewer or private sewer discharging into the septic tank to provide free ventilation above the water surface from the disposal field or seepage pit through the septic tank, building sewer and stack to the outer air.

H. All septic tanks shall include an effluent filter approved by the department, installed on the outlet of the tank before final discharge, with an access riser installed to grade.

~~[(8)]~~I. The sidewalls shall extend at least nine (9) inches above the liquid depth. The cover of the septic tank shall be at least two (2) inches above the back vent openings.

~~[(9)]~~J. Partitions or baffles between compartments shall be of solid, non-corrosive, durable material and shall extend at least four (4) inches above the water level. Metal or wooden baffles are prohibited.

(1) An inverted fitting equivalent in size to the tank inlet, but in no case less than four (4) inches in size, shall be installed in the inlet compartment side of the baffle with the bottom of the fitting placed midway in the depth of the liquid.

(2) If a horizontal slot is used, the slot shall extend the width of the tank, be no more than 6 inches in height and located midway in the depth of the liquid.

~~[Metal or wooden baffles are prohibited.]~~

~~[(10)]~~ Each tank shall be structurally designed to withstand all anticipated earth or other loads. All septic tank covers shall be capable of supporting an earth load of not less than three hundred (300) pounds per square foot when the maximum fill coverage does not exceed three (3) feet.

~~(a) Concrete septic tanks, monolithic precast.~~

~~(i) Minimum concrete thickness and reinforcement. Walls: two and one half (2 1/2) inches in thickness with 6 x 6 by 10 x 10 remesh, three thousand (3000) pounds per square inch (psi), air entrained. Floors: three (3) inches in thickness with 6 x 6 by 10 x 10 remesh, three thousand (3000) psi, air entrained. Covers: three (3) inches in thickness with 6 x 6 by 10 x 10 remesh, three thousand (3000) psi air entrained and No. 4. Rebar spaced at one (1) foot intervals across the width of tank. Unreinforced concrete shall be at least five (5) inches thick and have a compressive strength equal to that required by this Item (i) of Subparagraph (a) of Paragraph (10) of Subsection C of 20.7.3.403 NMAC.~~

~~(ii) Floors must be an integral part of the tank.~~

~~(iii) Where sections are used, tongue and groove joints or keyways shall be used and shall be sealed with an approved sealer.~~

~~(iv) Poured in place tanks must be designed and certified by a New Mexico registered architect or professional engineer.~~

~~(b) Concrete block, minimum thickness and reinforcement.~~

~~(i) Walls: Eight (8) inch block filled with concrete and sealed internally with an approved sealer. Wall shall be tied to the floor at each wall joint with No. 4 rebar.~~

~~(ii) Floors: Minimum four (4) inches thickness with 6 x 6 by 10 x 10 remesh and twelve (12) No. 4 rebar, with one (1) bar eight (8) inches from each side of each corner, with at least ten (10) inches embedded in the floor with a ninety (90) degree bend and extending at least ten (10) inches into the wall.~~

~~(iii) Covers: Minimum five (5) inches thickness with 6 x 6 by 10 x 10 remesh, three thousand (3000) psi, air entrained.]~~

~~[(e)]~~K. Fiberglass[,] or reinforced plastic tanks shall be IAPMO certified.

~~(i) The septic tank shell, including the ends, shall have a minimum thickness of three sixteenths inch (0.188").]~~

~~[(ii)]~~(1) Each access and inspection hole cover shall have approved fasteners not subject to deterioration by liquid or gases normally present in septic tank systems to assure that the covers will remain in place. All covers shall overlap the hole by a minimum of two (2) inches in all directions.

~~[(iii)]~~(2) Each tank shall be free from visual defects such as foreign inclusions, dry spots, air bubbles, pimples and delamination. The inner and outer surfaces shall have a smooth, continuous finish with no exposed fibers. Both the inner and outer surfaces shall have a continuous resin rich surface and no fibers shall be exposed either directly from cracks, porosity or holes, or indirectly through bubbles that may break and expose fibers.

~~[(iv)]~~ Each tank shall be constructed of reinforced polyester or other approved resin. Reinforcement may be fiberglass woven fabric, chopped strand mat, loose filament, roving or rope. Fiberglass reinforcement shall be treated with a coupling agent that will provide a compatible bond between the resin and the fiberglass. There shall be no less than thirty (30) percent (%) fiberglass reinforcement material and no less than seventy (70) percent (%) resin by weight used in the construction of each tank. The use of filler material shall not exceed thirty (30) percent (%) by weight. Manufacturer's data sheets covering all characteristics and properties of the resin, catalyst



and fiberglass reinforcement material used in tank construction shall be provided to the department. Complete information on the type of filler material used in tank construction shall be provided to the department. The percentages, by weight, of resin, reinforcement and filler incorporated into the septic tanks shall be provided to the department.]

~~[(+)](3)~~ The completed tank shall be watertight ~~[below the high water level and shall remain watertight under the maximum conditions of stress produced under the loads described in Subparagraph (d) of Paragraph (10) of Subsection C of 20.7.3.402 NMAC].~~

~~[d— Each tank shall be so constructed that the following requirements will be met. All tests are to be conducted with the tank at a temperature between sixty five (65) and eighty (80) degrees fahrenheit.~~

~~————— (i) — The Barcol hardness of tanks shall be no less than thirty five (35) units and no more than fifty five (55) units determined by use of a "Barcol impressor" (Barber Colman model GYZJ 934 I or equivalent) following the procedures set forth in ASTM— 2583 including any revisions.~~

~~————— (ii) — There shall be no permanent distortion or failure when tanks are sealed and evacuated to a vacuum of V inches of mercury, where V is equal to the maximum depth of earth cover in feet recommended by the manufacturer but not less than three (3) feet.~~

~~————— (iii) — There shall be no permanent distortion or failure when tanks are statically loaded in accordance with the following procedure: Bed the top of an empty tank in dry sand to a depth not exceeding four (4) inches below ground level. The tank shall be oriented as for service. Determine the maximum cross section area and load the top segment of the tank with sand bags to a total weight in pounds equal to: 420 x A, where A is the plan cross section in square feet. The bags should be distributed as uniformly as possible over the tank surface above the plane of maximum area, with the exception of the manhole, which shall be left unloaded.]~~

~~[(e)]4~~ A representative number, as determined by the department, of tanks delivered shall be tested as specified above. A statement certifying the gross weight of each tank tested shall be included with the results of each tank tested. Testing shall be accomplished by an approved materials testing laboratory, and all test results shall be certified by a professional engineer. No tank delivered shall differ in gross weight by more than plus ten (+10) or minus five (-5) percent (%) from the weight of tanks which have been subjected to the testing required above.

~~[(f)]5~~ Fiberglass or plastic tanks shall be installed according to the manufacturer's instructions. A copy of the manufacturer's installation instructions shall be available for inspection by the department at the installation site. ~~[Fiberglass or plastic tanks shall be installed level on a minimum of four (4) inches of 3/4 inch gravel bed. The sides of the tank shall be bedded with at least six (6) inches of sand.]~~

~~[(11) — Septic tanks installed under concrete or blacktop paving shall have the required manholes accessible by extending the manhole openings as described in Paragraph (4) of Subsection C of 20.7.3.402 NMAC to grade in a manner acceptable to the department.]~~

~~[D. — Materials. All tanks must be IAPMO approved or meet minimum IAPMO standards as demonstrated to the department by approved laboratory testing and certification by a registered professional engineer. Minimum standards include but are not limited to the following minimum specifications:~~

~~————— (1) — Concrete septic tanks. All concrete septic tanks shall be protected from corrosion by coating internally with an approved bituminous coating or by other acceptable means. The coating shall extend to at least six (6) inches below the waterline and shall cover all of the internal area, including inlets, outlets, and baffles above that point. Tank construction materials shall meet the following minimum specifications:~~

~~————— (a) — concrete strength — 3,000 psi @ 28 days; density 140 PCF;~~

~~————— (b) — cement, portland type I or III per ASTM C150 81;~~

~~————— (c) — admixtures per ASTM C233 82;~~

~~————— (d) — reinforcing per ASTM A615 for wire fabric, grade 40/60 R'd or equivalent.~~

~~————— (2) — Plastic or fiberglass tanks:~~

~~————— (a) — ultimate tensile strength — minimum 9,000 psi when tested in accordance with ASTM D 638 89, standard method of test for tensile properties of plastics;~~

~~————— (b) — flexural strength — minimum 16,000 psi when tested in accordance with ASTM D 790 86, standard method of test for flexural properties of unreinforced and reinforced plastics and electrical insulating materials; [and]~~

~~————— (c) — flexural modulus of elasticity — minimum 700,000 psi when tested in accordance with ASTM 790 86, standard method of test for flexural properties of unreinforced and reinforced plastics and electrical insulating materials.~~

~~————— (3) — Alternate materials, manufactured, pre-fabricated and owner built tanks may be approved by the department. Independent laboratory tests and engineering calculations certifying the tank capacity and structural stability shall be provided as required by the department.~~

E. Pump Stations and Equipment.

(1) Pump stations or pump chambers shall be watertight and shall be constructed of concrete, plastic, fiberglass or other approved material. Tanks and chambers shall be designed and constructed so as to serve their intended purpose and appropriately coated to resist corrosion.

(2) All valves, motors, pumps, aerators and other mechanical or electrical devices shall be located where they will be accessible for inspection and repair at all times and protected with a locking removable cover.

(3) Pump stations or pump chambers shall be equipped with both audible and visual alarms for high water and pump failure. All alarm and control circuits will be contained in weather proof control boxes or located inside a building or other weather proof structure. Alarms shall be located where they are readily seen and heard by the owner.

F. Building Sewer.

(1) The building sewer connects the building drain to the septic tank or liquid waste treatment unit. Horizontal building sewer piping shall be run in practical alignment and a uniform slope of not less than one fourth (1/4) of an inch per foot or two (2) percent toward the point of disposal provided that where it is impractical due to the structural features or arrangement of any building or structure to obtain a slope of one fourth (1/4) of an inch or two (2) percent, any such pipe or piping four (4) inches in diameter or larger may have a slope of not less than one eighth (1/8) of an inch per foot or one (1) percent, when first approved by the department.

(2) Each horizontal sewer pipe shall be provided with a cleanout at its upper terminal and each run of pipe which is more than one hundred (100) feet in length shall be provided with a cleanout for each one hundred (100) feet or fraction thereof. Cleanouts shall be installed per Section 406 (Cleanouts) and Section 1107 (Cleanouts) of the most recently adopted version of the Uniform Plumbing Code (UPC) and the New Mexico Plumbing Code.

(3) Sewer piping shall be cast iron, lead, copper, brass, schedule 40 ABS DWV (drain, waste and vent), schedule 40 PVC DWV, SDR 35, extra strength vitrified clay pipe or other approved materials having a smooth uniform bore. Vitrified clay pipe or fittings shall not be used above ground or where pressurized by a pump or ejector. Vitrified clay pipe or fittings shall be a minimum of twelve (12) inches below ground.]

[10/15/97; 20.7.3.402 NMAC - Rn, 20 NMAC 7.3.IV.402, 3/1/04]

**20.7.3.503 through 20.7.3.600 [RESERVED]**

**20.7.3.601 DESIGN; ADVANCED TREATMENT UNITS; GENERAL**

A. The level of treatment required and the type of disposal allowed shall be determined by the site evaluation and the character of the waste to be treated and disposed using 20.3.7.605 NMAC. A ~~non-discharging~~ liquid waste system with an approved non-discharging disposal design may be installed in lieu of the required advanced treatment system.

B. All proprietary treatment systems proposed for secondary or tertiary treatment must meet the performance standards of 20.7.3.602-604 NMAC, and must be certified by the technical advisory committee for that level of treatment.

C. Any design of a conventional or advanced treatment system with site or other limiting conditions that cannot be addressed by following a standard design from alternative resources recognized by the department shall be designed and sealed by a professional engineer.

**20.7.3.602 DESIGN; SECONDARY TREATMENT STANDARDS**

A. Secondary treatment systems shall meet the following requirements:

(1) 5-day biochemical oxygen demand not to exceed a 6-quarter rolling average of 30 mg/l with no single sample to exceed 60 mg/l.

(2) Total suspended solids not to exceed a 6-quarter rolling average of 30 mg/l with no single sample to exceed 60 mg/l.

B. Secondary treatment systems and the disposal from secondary treatment systems shall meet the specific site conditions set forth in 20.7.3.605 NMAC.

**20.7.3.603 DESIGN; TERTIARY TREATMENT STANDARDS**

A. Tertiary treatment systems shall provide nutrient removal in addition to secondary treatment.

B. Tertiary treatment systems shall be allowed for reduced lot size based on the following formula: total nitrogen concentration (in mg/l) = [lot size (in acres) / design flow (in gpd)] x 30,000. The concentration limit shall be based on a 6 quarter running average with no single sample exceeding twice of the concentration limit.

C. Tertiary treatment systems and the disposal from tertiary treatment systems shall meet the specific site conditions set forth in 20.7.3.605 NMAC.

**20.7.3.604 DESIGN; DISINFECTION TREATMENT STANDARDS**

A. Systems requiring disinfection shall provide treated effluent that shall not exceed 200 colony forming units (CFUs) of fecal coliform bacteria per 100 ml.

B. Disinfection is required to meet the specific site conditions set forth in 20.7.3.605 NMAC.

**20.7.3.605 DESIGN; MINIMUM REQUIRED TREATMENT LEVELS FOR SITE CONDITIONS;**

A. The required level of treatment shall be based on the most restrictive combination of siting conditions.

B. The following treatment levels are required for the soil types as described in Table 703.1:

(1) Type Ia - secondary treatment and disinfection;

(2) Type Ib, II, and III - primary treatment; and,

(3) Type IV - secondary treatment with pressure distribution.

C. The following treatment levels are required for the depth of suitable soil:

(1) Greater than or equal to 4 feet of suitable soil - primary treatment;

(2) From 2 to 4 feet of suitable soil - secondary treatment and disinfection;

(3) From 1 to 2 feet of suitable soil - tertiary treatment and disinfection; and,

(4) If less than 1 foot of suitable soil, the department shall require a non-discharging system.

D. The following treatment levels are required for the hydraulic loading rates and lot size:

(1) Less than or equal to 500 gallons per day per acre with a minimum lot size of 0.75 acre - primary treatment; and,

(2) Greater than 500 gallons per day per acre or less than 0.75 acre - tertiary treatment.

E. A non-discharging system may be used in lieu of advanced treatment.

F. A mound system in accordance with 20.7.3.807 may be used to meet clearance requirements or to overcome soil type limitations in lieu of advanced treatment.

**20.7.3.606 through 20.7.3.700 [RESERVED]**

~~**[20.7.3.403 DESIGN; AREA OF DISPOSAL FIELD AND SEEPAGE PITS:** The minimum required absorption area in a disposal field in square feet, and in seepage pits in square feet of side wall, shall be predicated on the liquid waste design flow rate and shall be determined by either utilizing the following table 403.1 based on the soil classification of the soil found in the proposed location of the disposal field, or by utilizing the formula specified in Subsection D of 20.7.3.404 NMAC based on the results of a standard percolation test as described in 20.7.3.404 NMAC.~~

~~Table 403.1~~

~~Soil Absorption Areas~~

	Square Feet
	Per Gallon
Soil Texture	Per Design Flow

Coarse Sand	0.83
-------------	------

Fine Sand*	1.67
------------	------

Sandy Loam	1.27
------------	------

Loam	1.67
------	------

Silty Loam	2.00
------------	------

Clay Loam	2.20
-----------	------

Clay	4.20
------	------

\*Soils having 50% or more fine sand plus very fine sand

A. When trench disposal fields are installed, a minimum of one hundred and fifty (150) square feet of bottom area shall be provided for each system exclusive of any hard pan, caliche, rock, clay, or other impervious formations. Side wall area in excess of the required minimum of twelve (12) inches and not to exceed thirty six (36) inches below the leach line may be added to the trench bottom area when computing total absorption areas. The

minimum twelve (12) inches of sidewall is part of the total absorption area of the conventional trench and shall not be included in any sidewall calculations.

\_\_\_\_\_ B. \_\_\_\_\_ Where leaching (absorption) beds are permitted in lieu of trenches, the bottom area and absorption area of each such bed shall be at least fifty (50) percent greater than the minimum required absorption area. A minimum of two hundred and twenty five (225) square feet of bottom area shall be provided for each bed system. Perimeter side wall area in excess of the required minimum of twelve (12) inches and not to exceed thirty six (36) inches below the leach line may be added to the bed bottom area when computing total absorption areas. The minimum 12 inches of perimeter sidewall area is part of the total absorption area of the bed and is not to be included in any sidewall calculations.

\_\_\_\_\_ C. \_\_\_\_\_ No excavation for an absorption trench, absorption bed or seepage pit shall extend within four (4) vertical feet of the seasonal high groundwater table nor to a depth where effluent may degrade a body of water or the environment.

\_\_\_\_\_ D. \_\_\_\_\_ The minimum effective absorption area in any seepage pit shall be calculated as the excavated side wall area below the inlet pipe exclusive of any hardpan, caliche, rock, clay or other impervious formations and may be provided in one or more seepage pits.

[10/15/97; 20.7.3.403 NMAC -- Rn, 20 NMAC 7.3.IV.403, Recompiled 11/27/01]

#### **20.7.3.404 DESIGN; PERCOLATION TESTS**

\_\_\_\_\_ A. \_\_\_\_\_ The department may require that percolation tests be performed and submitted with the permit application.

\_\_\_\_\_ B. \_\_\_\_\_ To determine the absorption qualities of questionable soils other than those listed in table 403.1, or at the option of the applicant, the proposed site shall be subjected to percolation tests acceptable to the department.

\_\_\_\_\_ C. \_\_\_\_\_ When a percolation test is performed, no on-site liquid waste system utilizing only primary treatment shall be permitted if that test shows the percolation rate equal to or faster than five (5) minutes per inch or slower than one hundred and twenty (120) minutes per inch.

\_\_\_\_\_ D. \_\_\_\_\_ Percolation test results shall be based upon the average percolation rate from a minimum of two test holes placed fifty feet apart where possible. Whenever the percolation rates determined by the individual tests performed in each of the two test holes vary by more than twenty (20) minutes per inch, a third test performed on a test hole equidistant from the original two test holes shall be performed and the minimum area of the absorption field shall be sized based upon the average of the three test results. Each percolation test shall be performed in the specific area and at the depth in which the absorption field is to be installed.

\_\_\_\_\_ (1) \_\_\_\_\_ Percolation test holes shall be dug vertically and shall be four (4) to twelve (12) inches in diameter and as deep as the proposed drainfield bottom. The sides of the test holes shall be scratched to remove any smeared or loose surfaces. Two (2) inches of gravel or sand shall be placed in the bottom of each test hole.

\_\_\_\_\_ (2) \_\_\_\_\_ Each test hole shall be saturated with a minimum of twelve (12) inches of water for at least four (4) hours prior to performance of the test. Clay soils shall be saturated for at least twelve (12) hours prior to test. In sandy soils the test may be performed immediately.

\_\_\_\_\_ (3) \_\_\_\_\_ The water rate drop shall be determined in the following manner. The hole shall be filled with not less than six (6) inches of water above the gravel and the height measured. The water level shall be measured every ten (10) minutes for a minimum of a one (1) hour period. If the water level drops less than one (1) inch in the first ten (10) minutes, the water level readings shall be measured every thirty (30) minutes over a four (4) hour period. The water shall be replenished as often as necessary but shall not be allowed to drop to less than two (2) inches above the gravel or sand. The times and water level measurements shall be recorded on the percolation test record which may be obtained from the department upon request.

\_\_\_\_\_ (4) \_\_\_\_\_ The percolation rate shall be calculated by dividing the time interval by the inches of water level drop recorded for the last ten (10) or thirty (30) minute test interval. This calculation shall be recorded on the percolation test record.

\_\_\_\_\_ E. \_\_\_\_\_ When a percolation test is utilized, the minimum required absorption area shall be computed using the formula:

\_\_\_\_\_ (1) \_\_\_\_\_ absorption area (square feet) = square root of percolation test results in minutes per inch times 0.32 times design flow (Q) in gallons per day.  $AA = \sqrt{t \times 0.32 \times Q}$ , where  $t$  = percolation rate;

\_\_\_\_\_ (2) \_\_\_\_\_ credit may be allowed for decreasing the absorption area requirements based upon secondary or advanced treatment efficiencies.

[10/15/97; 20.7.3.404 NMAC -- Rn, 20 NMAC 7.3.IV.404, Recompiled 11/27/01]

#### **20.7.3.[405]701 DESIGN; CONVENTIONAL DISPOSAL FIELD; DESIGN AND CONSTRUCTION**

A. ~~[Distribution lines shall be constructed of perforated PVC pipe or other approved materials, provided that sufficient openings are available for distribution of the effluent into the trench area.]~~ For conventional systems, the distribution lines shall have an inside diameter of no less than four (4) inches. Perforated pipe shall have two rows of holes, and a minimum perforated area of one and one-half (1 ½) square inches per linear foot. Perforations shall be located not less than 30 degrees or more than 60 degrees from the vertical on either side of the center line of the bottom of the pipe. All plastic pipe and fittings shall conform to the current and appropriate ASTM standards. End caps shall be installed on all distribution lines.  
[D3034-89, ASTM F405-89, Standard Specification for Corrugated Polyethylene (PE) Tubing and Fittings, or ASTM F810-85]

B. Before placing aggregate ~~[material]~~ or drain lines in a prepared excavation, all smeared or compacted surfaces shall be removed from trenches by raking to a depth of one (1) inch and the loose material removed. ~~[Clean stone, gravel, slag or similar aggregate material acceptable to the department, varying in size from three fourths (¾) inch to two and one half (2 ½) inches]~~ Aggregate shall be placed in the trench to the depth and grade required. [Glass, limestone, pumice and cinder are not acceptable as aggregate material.] Drain lines shall be placed on the aggregate ~~[material]~~ in an approved manner. The drain lines shall then be covered with aggregate ~~[material]~~ to a minimum depth of two (2) inches and then covered with untreated building paper, straw or similar porous material to prevent closure of voids with earth backfill. No earth backfill shall be placed over the aggregate ~~[material]~~ cover until authorized or approved by the department.

~~[C. A grade board staked in the trench to the depth of aggregate material shall be utilized when distribution line is constructed with drain tile or a flexible pipe material which will not maintain alignment without continuous support.]~~

~~[D.]~~ C. Approved [gravelless] proprietary drainfield[s] materials may be utilized [as an alternative to approved drainfields aggregates] when installed according to the manufacturer's recommendations. Sizing shall be determined by the department.

D. Capped inspection ports shall be constructed, at a minimum, of 4 inch diameter, SDR 35 or better pipe installed at the end of each trench, provide inspection access to the bottom of the trench and terminate at finished ground level.

E. ~~[When]~~ If seepage pits, authorized by variance only, are used in combination with disposal fields, the aggregate ~~[material]~~ in the trenches shall terminate at least five (5) feet from the pit excavation and the line extending from such points to the seepage pit shall be constructed of approved pipe with watertight joints.

F. Where two (2) or more drain lines are installed, an approved distribution box of sufficient size to receive lateral lines shall be installed at the head of each disposal field. The inverts of all outlets shall be level and the invert of the inlet shall be at least one (1) inch above the outlets. Distribution boxes shall be designed to insure equal flow and shall be installed on a level base in natural undisturbed or compacted soil or on a concrete footing.

(1) Concrete distribution boxes shall be coated on the inside with bituminous coating or other approved method acceptable to the department.

(2) All laterals from a distribution box to the disposal field shall be approved pipe with watertight joints. Multiple disposal field laterals, wherever practicable, shall be of uniform length.

(3) Connections between a septic tank and distribution box shall be laid with approved pipe with watertight joints on natural ground or compacted fill. Such approved pipe shall be SDR 35 or better.

(4) When two (2) or more drain lines are installed, the installer, after approval by the department, may install in lieu of a distribution box a tee fitting and a distribution header to multiple trenches provided that the tee and header pipe is level.

G. When more than five-hundred (500) lineal feet of leach line is required, ~~[a dosing tank shall be used. Dosing tanks shall be equipped with an automatic pump which discharges the tank a minimum of once every four (4) hours. The tank shall have a capacity equal to at least seventy five (75) percent of the interior capacity of the pipe to be dosed at one time. Where the total length of leachline exceeds one thousand (1000) lineal feet, the dosing tank shall be provided with two (2) pumps dosing alternately and each serving one half (1/2) of the leach field.]~~ a low-pressure dosed system shall be used.

~~[(4)]~~ H. Disposal fields shall be constructed as follows:

	MINIMUM	MAXIMUM
Number of drain lines	1 per field	
Length of each line	--	<del>[100]</del> <u>150</u> ft.
Bottom width of trench	<del>[18]</del> <u>12</u> in.	36 in.
<del>[Spacing of lines,</del>		



New material, deleted material

center to center	4 ft.	6 ft.]
Depth of earth cover of lines	[12]9 in.	--
Depth of Trench	--	6 ft.
Grade of lines	level	3 in./100 ft.
Aggregate material under drain lines	12 in.	--
Aggregate material over drain lines	[2 in.]	--
geotextile fabric	0 in.	--
other material	2 in.	--

[(-2)]I. Minimum spacing between trenches or leaching beds shall be four (4) feet plus (2) feet for each additional foot of depth in excess of one (1) foot below the bottom of the drain line. Distribution drain lines in leaching beds shall not be more than six (6) feet apart on centers and no part of the perimeter of the leaching bed shall be more than three (3) feet from a distribution drain line

[(-)]J. When necessary, to prevent line slope in excess of 3 inches per 100 feet, absorption trenches or beds shall be [stopped]stepped. The lines between each horizontal section shall be made with watertight joints and shall be designed so each horizontal trench or bed shall be utilized to the maximum capacity before the effluent shall pass to the next lower trench or bed. The lines between each horizontal absorption section shall be made with approved watertight joints and installed on natural or unfilled ground.

[10/15/97; 20.7.3.405 NMAC - Rn, 20 NMAC 7.3.IV.405, Recompiled 11/27/01]

**2.7.3.[406]702 DESIGN; SEEPAGE PIT; DESIGN AND CONSTRUCTION:** Installation of seepage pits shall be by variance only.

A. The minimum capacity of seepage pits shall conform to the requirements of [20.7.3.403 NMAC and of 20.7.3.404 NMAC] 20.7.3.703 NMAC.

B. Multiple seepage pit installations shall be served through an approved distribution box or be connected in series by means of a water[-]tight connection laid on undisturbed or compacted soil. The outlet from each seepage pit shall have an approved vented leg fitting extending at least twelve (12) inches below the inlet fitting.

C. Each seepage pit shall have an excavated horizontal dimension of not less than four (4) feet. Each such pit shall be lined with approved type whole new hard burned clay brick, concrete brick, concrete circular type cesspool blocks, or other approved materials.

D. The lining in each seepage pit shall be circular and laid on a firm foundation. Lining materials shall be placed tight together and laid with joints staggered. Except in the case of approved type pre-cast concrete circular sections, no brick or block shall be greater in height than its width and shall be laid flat to form at least a four (4) inch wall. Brick or block greater than twelve (12) inches in length shall have chamfered matching ends and be scored to provide for seepage. Excavation voids behind the brick, block or concrete liner shall have a minimum of six (6) inches of clean three fourths (3/4) inch gravel or rock.

E. All brick or block used in seepage pit construction shall have a minimum compressive strength of twenty-five hundred (2500) pounds per square inch.

F. Each seepage pit shall have a minimum sidewall (not including the arch) of ten (10) feet below the inlet pipe.

G. The arch, cover or dome of any seepage pit shall be constructed in one of the following three ways:

(1) Approved type hard burned clay brick, or solid concrete brick or block laid in cement mortar.

(2) Approved brick or block laid dry. In both of the above methods, an approved cement mortar covering of at least two (2) inches in thickness shall be applied, said covering to extend at least six (6) inches beyond the sidewalls of the pit.

(3) Approved type one or two piece reinforced concrete slab or three thousand (3000) pounds per square inch minimum compressive strength, not less than five (5) inches thick and designed to support an earth load of not less than four hundred (400) pounds per square foot.

H. Each such arch, dome or cover shall be provided with a nine (9) inch minimum inspection hole with plug or cover and shall be coated on the underside with an approved bituminous or other nonpermeable protective compound.

I. The top of the arch, dome or cover must be a minimum of twelve (12) inches but not more than four (4) feet below the surface of the ground. Risers must be provided to extend the arch, dome or cover to within twelve (12) inches of the surface.

J. An approved vented inlet fitting shall be provided in every seepage pit so arranged as to prevent the inflow from damaging the sidewall. When using a one or two piece concrete slab cover inlet, the inlet fitting may be an approved one fourth (1/4) bend fitting discharging through an opening in the top of the slab cover. On multiple seepage pit installations, the outlet fittings shall meet the requirements of Subsection B of 20.7.3 [406] 702 NMAC.

[10/15/97; 20.7.3.406 NMAC - Rn, 20 NMAC 7.3.IV.406, Recomplied 11/27/01]

**20.7.3.703 DESIGN: AREA OF DISPOSAL FIELD AND SEEPAGE PITS**

A. The minimum required absorption area in a disposal field in square feet, and in seepage pits in square feet of side wall, shall be predicated on the liquid waste design flow rate and shall be determined by utilizing the following Table 703.1 based on the soil classification found in the proposed location of the disposal field.

B. The soil classification shall be determined by two test holes located at opposite ends of the proposed disposal area.

C. A detailed soil profile, in accordance with USDA soil classification methodology, shall be submitted with the liquid waste application for each hole, indicating soil horizons, horizon thickness as a function of depth, and soil texture.

D. USDA soil surveys may be used where available to help assess typical soils in the area of the proposed installation.

E. The required absorption area shall be sized on the most restrictive soil horizon located below and within 4 feet of the bottom the absorption area.

F. Conventional treatment systems shall not be constructed in Type Ia soils where the depth to groundwater is less than 30 feet, Type IV soils, or gravel. For these soils, go to 20.7.3.605 NMAC.

G. Effluent distribution to Type IV soils shall be accomplished by means of timed low pressure dosed distribution.

H. The required absorption area shall be calculated by the following formula: ABSORPTION AREA = Q X AR, where: Q = the design flow rate in gallons per day, AR = application rate (from Table 703.1)

**Table 703.1: Application Rates by Soil Types for Conventional Treatment Systems**

<u>Soil Type</u>	<u>Soil Texture</u>	<u>Application Rate (AR) (sq. ft./gal.)</u>
<u>Ia</u>	<u>Coarse Sand</u>	<u>0.83</u> <u>(See Subsection F of</u> <u>20.7.3.703 NMAC)</u>
<u>Ib</u>	<u>Medium Sand, Loamy Sand</u>	<u>1.00</u>
<u>II</u>	<u>Sandy Loam</u>	<u>1.27</u>
	<u>Fine Sand , Loam</u>	<u>1.67</u>

III	<u>Silt, Silt Loam,</u> <u>Clay Loam, Silty Clay Loam, Sandy Clay Loam,</u> <u>Sandy Clay</u>	2.20
IV	<u>Silty Clay, Clay</u>	4.20 (See Subsection G of <u>20.7.3.703 NMAC</u> )

I. The gravel content of in place natural soil shall not exceed:

- (1) thirty-five percent (35%) gravels for Type I soils; and,
- (2) sixty percent (60%) gravels for Type II, Type III and Type IV soils.

J. When trench disposal fields are installed, a minimum of one hundred and fifty (150) square feet of bottom area shall be provided for each system exclusive of any hard pan, caliche, rock, clay, or other impervious formations. Side wall area in excess of the required minimum of twelve (12) inches and not to exceed thirty-six (36) inches below the leach line may be added to the trench bottom area when computing total absorption areas. The minimum twelve (12) inches of sidewall is part of the total absorption area of the conventional trench and shall not be included in any sidewall calculations.

K. Leaching (absorption) beds are allowed. The absorption area of the bed shall be at least fifty (50) percent greater than the minimum required absorption area for trenches with a minimum of two hundred and twenty-five (225) square feet of bottom area. Perimeter side wall area in excess of the required minimum of twelve (12) inches and not to exceed thirty-six (36) inches below the leach line may be added to the bed bottom area when computing total absorption areas. The minimum 12 inches of perimeter sidewall area is part of the total absorption area of the bed and is not to be included in any sidewall calculations.

L. The minimum effective absorption area in any seepage pit shall be calculated as the excavated side wall area below the inlet pipe exclusive of any hardpan, caliche, rock, clay, or other impervious formations and may be provided in one or more seepage pits.

[10-15-97; 20.7.3.25 NMAC - Rp 20NMAC7.3.403, x/x/2003]

#### **2.7.3.407 DESIGN; SPECIAL LIQUID WASTE DISPOSAL**

A. When liquid wastes are discharged containing excessive amounts of grease, garbage, flammable wastes, sand or other ingredients which may affect the operation of an on-site liquid waste system, an interceptor for such wastes must be installed.

B. Installation of such interceptors shall comply with Chapter 7 of the Uniform Plumbing Code as administered by the construction industries division. Interceptors shall be installed in locations that meet the minimum setback and clearance requirements of table 303.1.

[10/15/97; 20.7.3.407 NMAC - Rn, 20 NMAC 7.3.IV.407, Recompiled 11/27/01]

#### **2.7.3.408 DESIGN; INSPECTION AND TESTING**

A. Inspection

(1) The person doing the work authorized by the permit shall notify the Department, orally or in writing, when the said work is ready to be inspected. Such notification shall be given not less than forty-eight (48) hours before the work is to be inspected.

(2) System components shall be properly identified as to manufacturer and shall meet all specifications specified in 20.7.3.401—410 NMAC. Septic tanks, holding tanks (vaults) or other primary treatment systems shall have the rated capacity, the registration number and the year of manufacture permanently marked on the unit.

B. Testing

(1) The department may require septic tanks or other primary components to be filled with water to flow line prior to inspection by the department. If required by the department, all seams or joints shall be left exposed (except the bottom) and the tank shall remain watertight for a period not less than twenty-four hours.

~~\_\_\_\_\_ (2) The department may require a flow test be performed through the system to the point of effluent disposal. All lines and components shall be watertight. Capacities, required air space, and fittings shall meet the requirements of 20.7.3.401—410 NMAC.~~

~~[10/15/97; 20.7.3.408 NMAC—Rn, 20 NMAC 7.3.IV.408, Recompiled 11/27/01]]~~

~~**[2.7.3.409] DESIGN; AEROBIC TREATMENT SYSTEMS:** Alternative on site liquid waste systems employing aerobic treatment may be substituted for conventional septic tanks provided the permit applicant demonstrates that the proposed system will meet the requirements of 20.7.3.306 NMAC, whether its aeration system is operating or not.~~

~~[10/15/97; 20.7.3.409 NMAC—Rn, 20 NMAC 7.3.IV.409, Recompiled 11/27/01]]~~

~~**[2.7.3.410] DESIGN; ABANDONED SEWERS AND ON SITE LIQUID WASTE SYSTEMS:**~~

~~\_\_\_\_\_ A. Every abandoned building sewer, or part thereof, shall be plugged or capped utilizing a cap or plug prescribed by the Uniform Plumbing Code within five (5) feet of the property line.~~

~~\_\_\_\_\_ B. Every cesspool, holding tank, septic tank, seepage pit or other liquid waste treatment unit which has been abandoned or has otherwise been discontinued from further use or to which no waste or building sewer from a plumbing fixture is connected, shall have the liquid waste pumped therefrom and properly disposed. The empty liquid waste treatment unit shall be completely filled with earth, sand, gravel, concrete or other approved material.~~

~~\_\_\_\_\_ C. The top cover or arch over the cesspool, holding tank, septic tank, seepage pit or other liquid waste treatment unit shall be removed before filling and the filling shall not extend above the top of the vertical portions of the sidewalls or above the level of any outlet pipe until inspection or authorization by the department. After such inspection or authorization, the cesspool, holding tank, septic tank, seepage pit or other liquid waste treatment unit shall be filled to the level of the top of the ground.~~

~~\_\_\_\_\_ D. Where disposal facilities are abandoned consequent to connecting any premises with a public sewer, the permittee making the connection shall fill all abandoned facilities as required by the department within 30 days from the time of connection.~~

~~[10/15/97; 20.7.3.410 NMAC—Rn, 20 NMAC 7.3.IV.410, Recompiled 11/27/01]]~~

**20.7.3.[444]704 [-] through 20.7.3.[500]800** [RESERVED]

**20.7.3.801 DESIGN; ALTERNATIVE DISPOSAL:** Alternative disposal systems include, but are not limited to, privies, cluster systems, composting/incinerating toilets, evapotranspiration systems, mounds, subsurface and surface irrigation, holding tanks, graywater systems and others as approved by the department.

**20.7.3.802 PRIVIES:**

A. A privy or outhouse may be used to dispose of non-liquid-carried human excreta directly to the soil must meet the requirements of 20.7.3 NMAC, but may be used if the following conditions are met:

(1) Distance from pit bottom to bedrock, impermeable layer, or groundwater is at least four (4) feet;

(2) The privy or outhouse is constructed to prevent access by flies or other vermin;

(3) The privy or outhouse is located to prevent flooding;

(4) There is sufficient replacement area for two (2) additional pits; and

(5) Privy or outhouse pits shall be filled with clean earth when excreta accumulates to within one foot of the ground surface.

(6) No privy shall be located on a lot less than 0.75 acre.

B. No person shall install or have installed a privy or outhouse unless that person obtains a permit issued by the department prior to construction of such installation. At the time of application, the total number of privies or outhouses and their replacement locations shall be indicated. When a privy or outhouse pit is filled, the privy or outhouse may be moved to a previously identified replacement location on the same lot without altering the permit.

**20.7.3.803 CLUSTER SYSTEMS:**

A. Use of a cluster system may be considered when lot sizes, location, or site conditions make conventional disposal unacceptable.

B. Cluster systems shall be designed and constructed in accordance with the requirements of this regulation.

- C. Each user connected to the system shall be a permittee and shall be indicated on the permit.
- D. Each permittee on a cluster system shall be a party to a legally binding, written agreement that provides for the mutual ownership, service, and maintenance for the life of the system and the agreement shall be recorded in the county in which the property is located.
- E. The parties to the written agreement shall obtain all necessary rights of way, easements, or ownership of properties necessary for the operation of the system. All parties that use the cluster system shall be a party to the agreement.
- F. The combined area of the lots served by the cluster system plus the area of the parcel where the system is located, if separated from the lots served, shall be used to determine the allowable lot size.

**20.7.3.804 COMPOSTING AND INCINERATING TOILETS:**

- A. The installation of composting and incinerating toilets meeting ANSI/NSF International Standard 41 shall be permitted.
- B. The installation of a composting/incinerating toilet shall not reduce the design flow for the property.
- C. Composting/incinerating toilets shall not be used on a lot less than 0.75 acre.

**20.7.3.805 IRRIGATION/REUSE SYSTEMS:**

- A. Effluent may be used for irrigation provided that, at a minimum, it shall meet secondary treatment standards prior to use.
- B. The effluent may be utilized either subsurface or above ground. The effluent shall meet disinfection standards in Subsection A of 20.7.3.604 NMAC when discharged above ground.
- C. Above ground discharge shall be by bubblers, drip irrigation, or other similar low pressure systems. Garden hoses and high pressure spray or sprinkler systems are prohibited. All above ground piping, drip irrigation carrying re-used water shall be identified as non-potable water by using labeling or color coding (purple, lavender).
- D. Application of the effluent resulting in standing or ponding of the effluent, whether liquid or frozen, shall be prohibited. The application of effluent shall not result in the effluent leaving the application area.
- E. Irrigation systems shall have no cross connections, direct or indirect, with potable water systems.
- F. All irrigation systems shall be pressure dosed to assure an even distribution and loading of effluent throughout the application area.
- G. All parts of the reuse system shall be protected from freezing.
- H. Effluent shall be contained on permitted property.
- I. The effluent shall be applied to a suitable landscaped area.

**20.7.3.806 EVAPOTRANSPIRATION SYSTEMS:**

- A. Evapotranspiration systems shall consist of a conventional treatment unit and an evapotranspiration bed (ET bed) for disposal. Evapotranspiration systems shall meet the requirements of 20.7.3.302 NMAC. Unlined ET beds shall meet the clearance, set back, and lot size requirements for conventional absorption systems. Lined ET beds shall be underlain by a liner as specified in Paragraph (3) of Subsection L of 20.7.3.7 NMAC.
- B. The minimum bottom area of ET beds shall be determined from the following formula:  
 $A = 391 \times Q \div E_L$  where, A = the bottom area of the bed in square feet, Q = the design flow in gallons per day, and  $E_L$  = the average annual lake evaporation for the site in inches per year.
- C. The average annual lake evaporation shall be determined from the map "Gross Annual Lake Evaporation, New Mexico", USDA, April 1972, or successor version.
- D. The minimum bed depth shall be twenty four (24) inches as measured from the bottom of the ET bed to the overflow level. The surface crowning, which increases runoff from the ET bed, is above the overflow level of the ET bed. Maximum ET bed depth shall be thirty (30) inches. The bottom of the ET bed shall be level.
- E. The ET bed location shall be in an area where exposure to the sun and wind will be maximized.
- F. The distribution piping within the ET bed shall be embedded in gravel and covered meeting the specifications in 20.7.3.701 NMAC. Use of approved proprietary drainfield products may be used in lieu of pipe and gravel.
- G. The capillary sand fill shall contain eighty five (85%) or more sand; the percentage of silt plus one and one-half times the percentage of clay shall not exceed fifteen percent (15%). Fine to medium sand is preferred.



H. A loamy sand shall be used for the surface crown. Where a loamy sand is not available, capillary sand may be used.

I. The crown surface shall be planted with vegetation suited to the climate and soil of the site and to the wastewater quality and quantity.

J. For a gravity feed system the overflow height of the ET bed shall be lower than the invert of the septic tank outlet.

K. All ET beds shall be equipped with an inspection port that is suitable to use to pump the system, if needed.

#### **20.7.3.807 MOUND SYSTEMS:**

A. Mound systems shall meet the requirements of 20.7.3.302 NMAC.

B. Mounds are generally constructed entirely above the surrounding ground surface, however, the mound may be partially buried.

C. The design of the mound system shall be in accordance with the most current design standards of the Wisconsin mound system. [The Wisconsin mound manual, SSWMP, university of Wisconsin-Madison or other reference sources should be consulted.]

D. Pressure distribution to the mound shall be required.

E. For Type III and IV soils, mounds shall not be installed on slopes greater than six percent (6%). For Type Ia through II soils, mounds shall not be installed on slopes greater than twelve percent (12%).

F. The finished side slope of the mound shall be at a maximum 1:4 vertical to horizontal slope.

#### **20.7.3.808 LOW PRESSURE DOSED DISPOSAL SYSTEMS**

A. Low pressure dosed (LPD) disposal systems may be used to achieve uniform distribution of wastewater over the entire infiltrative surface. Effluent from this type of system is pumped under low pressure through solid pipe into perforated lateral lines installed within a disposal system.

B. Low pressure dosed disposal systems may be used with any on site liquid waste system including conventional treatment systems, gray water systems, and advanced treatment systems.

C. Low pressure dosed disposal systems may be used with any disposal system including trenches, beds, mounds, gravelless systems, evapotranspiration systems, surface application, and drip irrigation.

D. Lift stations are not classified as low pressure dosed disposal systems.

E. Low pressure dosed disposal systems may use a timer to equalize the flow over a 24-hour period. LPD disposal systems may also be designed to rotate between separate disposal areas by using rotator valves.

F. Low pressure dosed disposal systems may use dosing siphons or pumps.

G. All pumps shall be rated by the manufacturer for pumping sewage or effluent.

H. A single pump may be used for design flows equal to or less than 1,000 gpd. Dual pumps are required for design flows over 1,000 gpd.

I. Design of the system shall include:

(1) design flow;

(2) soil absorption area sized according to the effluent loading rates found in Section 20.7.3.703 NMAC;

(3) spacing between lines with a minimum of 2 feet of separation;

(4) length of pipe;

(5) diameter of perforated lateral lines used;

(6) size and spacing of holes or emitters; and

(7) pump performance sizing with allowances for head and friction losses at rated flows in gallons per minute.

J. A ball valve located vertically at the end of each lateral line for inspection and flushing except for proprietary drip irrigation systems.

K. Approved proprietary drip irrigation systems shall be designed and installed according to manufacturer's specifications.

L. Lateral lines shall be placed parallel to the natural contours of the site.

M. The distribution holes in the lateral lines shall be shielded or protected in some manner to prevent the infiltration of soil into the pipe.

#### **20.7.3.809 HOLDING TANK REQUIREMENTS:**

A. The installation of holding tanks for the disposal of liquid wastes shall be authorized on a temporary basis only and only for residential units where conventional or alternative liquid waste treatment systems cannot be installed, except where noted in paragraph E below.

B. The installation of holding tanks shall not be authorized for commercial units.

C. Holding tanks shall not be installed to serve any design flow greater than three hundred-seventy-five (375) gallons per day, except to replace an existing holding tank. Total design flow on any property served by a holding tank shall not exceed 375 gallons per day.

D. The installation of holding tanks shall be authorized for no more than one (1) year from the date of installation for units occupied more than one hundred twenty (120) days per calendar year.

E. The installation of holding tanks shall be authorized for permanent use only for the following:

(1) residential units, with a design flow rate of 375 gpd or less, occupied one hundred twenty (120) days or less per calendar year;

(2) residential units utilizing the holding tank only for the discharge of toilet waste in conjunction with a conventional treatment system for the remainder of the wastewater;

(3) non-residential, non-commercial units, such as guard shacks, toll booths, etc., with a design flow rate of 100 gpd or less; and,

(4) the collection of RV wastes and portable toilet wastes for disposal in accordance with 20.7.3.306 NMAC.

F. Holding tanks shall be constructed of the same materials and by the same procedures to the same standards as described in 20.7.3.501-502 NMAC except that they shall have no discharge outlet.

G. All holding tank installations shall be tested on site for water tightness.

H. The minimum size of a holding tank shall be 1000 gallons or four (4) times the design flow, whichever is greater.

I. Holding tanks shall be located in an area readily accessible to a pump vehicle under all weather conditions and where accidental spillage during pumpage will not create a nuisance or a hazard to public health.

J. Holding tanks shall be protected against flotation under high ground water conditions by weight of tank (ballasting), earth anchors, or by surface or shallow installation. Holding tanks shall be protected from freezing.

K. Holding tanks shall be equipped with a visible and audible high water alarm system placed in a conspicuous location approved by the department. The alarm shall be set to activate at 80% of the tank capacity. It shall be a violation of these regulations to tamper with or disconnect the alarm system.

M. The owner of a holding tank shall have the tank pumped to prevent discharge from the tank and the liquid waste (septage) properly disposed of in compliance with all applicable laws and regulations. Owners of holding tanks shall maintain records demonstrating pumping and proper disposal of septage from the units to prevent discharge. Copies of pumping and disposal manifests shall be retained by the owner for at least seven years, and shall be made available to the department for inspection on request. The records shall be:

(1) kept on a form provided by the department if requested;

(2) accompanied by such other documentation as the department may reasonably require;

(3) signed by the lot owner or an authorized representative; and

(4) submitted on a semi-annual basis, or a schedule otherwise determined by the department, to the department field office having jurisdiction.

N. No person shall install, operate, modify, or maintain a holding tank (that) which allows discharge to the soil or to waters of the state.

O. The department may perform site inspections periodically to ensure that a holding tank does not discharge.

P. All residential and commercial units utilizing a holding tank shall connect to a public sewer upon availability and in accordance with the local authority that has jurisdiction. A public sewer shall be deemed available when the public sewer is located in any thoroughfare, right-of-way, or easement abutting the lot on which the residential or commercial unit is located. The holding tank shall be properly abandoned in accordance with 20.7.3.307 NMAC within 30 days of connection to the public sewer.

**20.7.3.810 GRAYWATER DISCHARGES:** graywater discharge of less than 250 gallons per day of private residential graywater originating from a residence for the resident's household flower gardening, composting or landscaping irrigation shall be allowed if;

A. a constructed graywater distribution system provides for overflow into the sewer system or on-site wastewater treatment and disposal system;

B. a graywater storage tank is covered to restrict access and to eliminate habitat for mosquitos or other vectors;

C. a graywater system is sited outside of a floodway;

D. graywater is vertically separated at least five feet above the ground water table;

E. graywater pressure piping is clearly identified as a nonpotable water conduit;

F. graywater is used on the site where it is generated and does not run off the property lines;

G. graywater is discharged in a manner that minimizes the potential for contact with people or domestic pets;

H. ponding is prohibited, discharge of graywater is managed to minimize standing water on the surface and to ensure that the hydraulic capacity of the soil is not exceeded;

I. graywater is not sprayed;

J. graywater is not discharged to a watercourse;

K. graywater use within municipalities or counties complies with all applicable municipal or county ordinances enacted pursuant to Chapter 3, Article 53 NMSA 1978;

L. graywater is not stored longer than 24 hours before being discharged;

M. graywater use for purposes other than irrigation or composting is prohibited, unless a permit for such use is issued by the department;

N. graywater is not used to irrigate food plants except for fruit and nut trees;

O. graywater is discharged to a mulched surface area or to an underground irrigation system;

P. graywater is not discharged closer than 100 feet to a watercourse or private domestic well, or closer than 200 feet to a public water supply well;

Q. graywater does not create a public nuisance;

R. for residential units using an on-site liquid waste system for blackwater treatment and disposal, the use of a graywater system does not change the design, capacity, or absorption area requirements for the on-site liquid waste system at the residential unit, and the on-site liquid waste system is designed and sized to handle the combined blackwater and graywater flow if the graywater system fails or is not fully used; and,

S. graywater does not contain hazardous chemicals derived from activities such as cleaning car parts, washing greasy or oily rags, or disposing of waste solutions from home photo labs or similar hobbyist or home occupational activities.

[20.7.3.310 NMAC - N, 3/1/04]

**20.7.3.811 GRAYWATER SYSTEMS:** Graywater systems not meeting the requirements of 20.7.3.810 NMAC shall meet the following requirements:

A. The installation of separate graywater systems shall be authorized for single family residential units and shall be located on the lot served. The capacity of the on-site liquid waste system, including required replacement area, shall not be decreased or otherwise affected by the existence or proposed installation of a graywater system servicing the lot.

B. All information required in 20.7.3.402 NMAC for the issuance of a permit shall be required.

C. Design flows for graywater systems shall be calculated by the following:

(1) Twenty percent (20%) of the total design flow for the segregation of laundry waste; and,

(2) Thirty-three percent (33%) of the total design flow for the segregation of the bathroom (showers, tubs, and wash basin) waste.

D. For graywater systems on lots where the residential unit is served by a sewerage system, the minimum lot size set forth in 20.7.3.301 NMAC shall not be required.

E. Clearance requirements for graywater systems shall meet the requirements of 20.7.3.303 NMAC.

F. Setback requirements for graywater systems shall meet the requirements of 20.7.3.302 NMAC except for the following:

(1) Property lines, two (2) feet for disposal area;

(2) Building or structure, two (2) feet for disposal area; and,

(3) Building or structure, zero (0) feet for above ground tanks.

G. A treatment unit shall be required for all graywater systems. If a tank is utilized as the treatment unit:

(1) The tank may be a single compartment;

(2) The tank shall be sized to accommodate one day design flow; and,

(3) Access to the tank shall be provided by a tamper resistant lid installed at grade.

Graywater should be utilized within twenty-four (24) hours of collection unless additional treatment is provided.

H. Tanks installed below ground shall meet the requirements of 20.7.3.501-502 NMAC except for the requirements stated in Paragraph G of 20.7.3.801 NMAC. Tanks shall be protected against possible floatation.

I. Above ground tanks shall be constructed of solid durable materials, not subject to corrosion or decay, and shall be approved by the department. Above ground tanks shall be set on a three inch (3") minimum concrete pad. Metal tanks shall not be authorized.

J. All tanks shall have an overflow drain with a permanent connection to the building drain or building sewer. The tank shall be protected against sewer line backflow by a backwater valve.

K. Each tank shall be vented as required by chapter 9 of the uniform plumbing code.

L. Each tank shall have its rated liquid capacity permanently marked on the unit. In addition, a sign "GRAYWATER SYSTEM, DANGER – UNSAFE WATER" shall be permanently marked on the tank.

M. The disposal system shall be constructed in accordance with 20.7.3.805 NMAC.

N. The graywater system shall have no direct or indirect cross connections with potable water systems.

O. Graywater use for purposes other than irrigation is prohibited. Irrigation of edible food crops is prohibited.

#### **20.7.3.812 PUMP STATIONS AND EQUIPMENT**

A. Pump stations or pump chambers shall be watertight and shall be constructed of concrete, plastic, fiberglass or other approved material. Tanks and chambers shall be designed and constructed so as to serve their intended purpose and appropriately coated to resist corrosion.

B. All valves, motors, pumps, aerators and other mechanical or electrical devices shall be located where they will be accessible for inspection and repair at all times and protected with a locking removable cover.

C. Pump stations or pump chambers shall be equipped with both audible and visual alarms for high water and pump failure. All alarm and control circuits will be contained in weather-proof control boxes or located inside a building or other weather proof structure. Alarms shall be placed in a conspicuous location approved by the department.

[10/15/97; 20.7.3.402 NMAC - Rn, 20 NMAC 7.3.IV.402, Recompiled 11/27/01]

#### **20.7.3.813 BUILDING SEWER**

A. The building sewer connects the building drain to the septic tank or liquid waste treatment unit. Horizontal building sewer piping shall be run in practical alignment and a uniform slope of not less than one-fourth (1/4) of an inch per foot or two percent (2%) toward the point of disposal provided that where it is impractical due to the structural features or arrangement of any building or structure to obtain a slope of one-fourth (1/4) of an inch or two percent (2%), any such pipe or piping four (4) inches in diameter or larger may have a slope of not less than one-eighth (1/8) of an inch per foot or one percent (1%), when first approved by the department.

B. Each horizontal sewer pipe shall be provided with a cleanout at its upper terminal and each run of pipe which is more than one-hundred (100) feet in length shall be provided with a cleanout for each one-hundred (100) feet or fraction thereof. Cleanouts shall be installed per Section 406 (Cleanouts) and Section 1107 (Cleanouts) of the most recently adopted version of the uniform plumbing code (UPC) and the New Mexico plumbing code.

C. Sewer piping shall be cast iron, lead, copper, brass, schedule 40 ABS DWV(drain, waste and vent), schedule 40 PVC DWV, SDR 35, extra strength vitrified clay pipe or other approved materials having a smooth uniform bore. Vitrified clay pipe or fittings shall not be used above ground or where pressurized by a pump or ejector. Vitrified clay pipe or fittings shall be a minimum of twelve (12) inches below ground.

[10/15/97; 20.7.3.402 NMAC - Rn, 20 NMAC 7.3.IV.402, Recompiled 11/27/01]

#### **20.7.3.814 through 20.7.3.900 [RESERVED]**

#### **20.7.3.901 MONITORING;**

A. As a condition to any permit, the owner of a on-site liquid wastes system shall permit department personnel right of entry to the property at reasonable times to allow for effluent sampling or evaluating the general state of repair or function of the system.

B. On-site liquid waste systems that require secondary treatment levels be achieved shall be sampled and analyzed only for 5-day BOD quarterly or as otherwise required by the department to meet the requirements of the permit. Chemical oxygen demand (COD) may be substituted for BOD5 with an acceptable calibration curve as approved by the department.

C. On-site liquid waste systems that require tertiary treatment levels be achieved shall be sampled and analyzed only for total nitrogen quarterly or as otherwise required by the department to meet the requirements of the permit.

D. Advanced systems requiring disinfection shall be sampled and analyzed for fecal coliform quarterly or as otherwise required by the department. In addition:

(1) When chlorine is used for disinfection, the total chlorine residual, at all times, shall be equal to or greater than 1.0 mg/l after fifteen (15) minutes detention time at peak flows.

(2) Alternative disinfection methods, such as ultraviolet light, ozone, or other methods, may be utilized after department approval.

E. All sampling and analysis shall be in accordance with the most current edition of *standard methods for the examination of water and wastewater* or other approved methods.

F. Sampling shall occur at the time the system is expected to be at peak usage, or as close to peak usage as possible.

G. Monitoring reports shall be submitted to the local field office within thirty (30) days of the required sampling event.

H. All laboratory test results exceeding the permit limits shall be reported to the local field office within five (5) working days.

I. Sampling frequency shall be quarterly unless otherwise specified in the permit.

J. If any two consecutive samples exceed the single sample limit, the system design and operation shall be evaluated by a professional engineer or a maintenance service provider for conformance with permitting conditions, and shall be adjusted to bring the effluent quality into compliance.

K. If the 6-quarter rolling average exceeds the treatment standards specified in Sections 20.7.3.602 and 603 NMAC, the treatment system shall be considered a failed system pursuant to Paragraph (1) of Subsection F of 20.7.3.7 NMAC and an application for a new treatment system meeting the requirements of 20.7.3 NMAC shall be submitted to the department.

L. The following shall be considered as violations of the monitoring requirements of the permit:

(1) Failure to collect, analyze and report sampling results;

(2) The submission, by the owner or maintenance entity of an advanced treatment system, or agent or employee thereof, of misleading, or inaccurate information to the department, through neglect; and,

(3) The submission of fraudulent data produced with an intention to deceive including the following:

(a) Apparent measurement results for which no measurement or test results were actually made as determined by the absence of the supporting records which are usually made;

(b) Measurements or test results obtained by deliberately and knowingly making measurements or collecting samples at places and times other than as specified in the permit or 20.7.3 NMAC; and,

(c) Test results obtained through use of unapproved and erroneous sampling, preservation, storage, or analysis procedures.

[20.7.3.901 NMAC -N, x/x/2003]

#### **20.7.3.902 OPERATION AND MAINTENANCE:**

A. Conventional treatment systems:

(1) The homeowner or system owner shall have the system inspected and evaluated by an inspector upon transfer of property.

(2) At the time of inspection:

(a) the sludge and scum levels shall be determined and the septic tank pumped as needed;

(b) the effluent filters shall be cleaned and replaced if damaged or not found in place; and,

(c) the disposal field shall be visually evaluated for surfacing sewage.

(3) Household hazardous waste and high strength waste shall not be introduced into the system.

B. Advanced treatment systems:

(1) The homeowner or system owner shall have the system inspected and evaluated by an inspector every two years and upon transfer of property and ensure the maintenance is performed in accordance with the manufacturers specifications.

(2) At the time of inspection:

(a) the sludge and scum levels in the primary tank shall be determined and the tank pumped as needed; and,

(b) the effluent filters shall be cleaned and replaced if damaged or not found in place if a filter is applicable to the system.



(3) Household hazardous wastes shall not be introduced into the system unless otherwise authorized by the department.

(4) The system shall be maintained by a maintenance service provider according to the maintenance contract approved by the department.

(5) Owners of advanced treatment systems existing prior to the effective date of 20.7.3 NMAC shall be responsible for properly operating and maintaining the system in accordance with the recommendations of the manufacturer and the installer of the system.

C. Inspections shall be recorded on forms approved by the department. Inspection reports shall be kept on file by the inspector of the on-site liquid waste system. Copies of all inspection records shall be submitted to the department. Copies of inspection reports shall be submitted to the local field office within 15 days of the inspection, with necessary corrective actions completed within 15 additional days. In addition, all inspection reports shall include the global positioning system (GPS) coordinates of the tank.

D. Any spillage that may occur during tank pumpout shall be cleaned up immediately and the spill area disinfected with a sodium or calcium hypochloride solution.

[20.7.3.902 NMAC -N, x/x/2003]

#### **20.7.3.903 MAINTENANCE SERVICE PROVIDERS (MSP) FOR CONVENTIONAL AND ADVANCED ON-SITE LIQUID WASTE SYSTEMS:**

A. Maintenance service providers (MSP) shall at a minimum:

(1) obtain certification by the national association of waste transporters (NAWT) or equivalent;

(2) inspect, operate and maintain the system in accordance with the manufacturer's specification; and,

(3) submit pumping and inspection records upon request to the department.

B. The MSP personnel shall be certified by the manufacturer for the proprietary unit being maintained.

C. The MSP personnel shall be trained in the proper operation and maintenance of the system.

D. The MSP personnel shall have the ability to sample the unit in accordance with approved sampling methods under this part.

E. The MSP shall have in place a standardized quality assurance/quality control (QA/QC) plan.

F. The MSP shall be able to respond to emergency situations within forty-eight (48) hours of being notified.

G. A public MSP shall adopt an ordinance, bylaw or rule, as appropriate, approved by the department, detailing the terms and conditions of service.

H. A private MSP shall use a contract for service that contains, at least, minimum standards approved by the department.

I. The MSP shall meet minimum requirements, as promulgated by the department, for effective operation, such as:

(1) reasonable response time;

(2) appropriate equipment;

(3) parts inventory;

(4) quality assurance/quality control plan; and,

(5) insurance.

[20.7.3.903 NMAC -N, x/x/2003]

#### **20.7.3.904 REQUIREMENTS FOR CERTIFICATION:**

A. The department shall develop a certification program within 2 years of the effective date of these regulations that shall meet the requirements specified below.

(1) Any person offering the services of an on-site liquid waste system site evaluator, system designer, installer, wastewater reuse irrigator, inspector, maintenance service provider, or septage pumper shall be certified after completing a program and passing an exam approved by the department.

(2) Employees of the department reviewing, approving, or inspecting on-site liquid waste systems shall be certified as department liquid waste specialist after completing a program and passing an exam approved by the department.

(3) A homeowner shall complete a program and pass an exam approved by the department prior to the issuance of a permit for a homeowner installed system.

B. The department shall develop general requirements for certifications of persons involved in the liquid waste program as specified below.

(1) Site evaluators shall demonstrate competence in soil evaluation to determine acceptable liquid waste disposal application rates and identify potential areas of concern, such as fractured bedrock, shallow ground water, and karst terrain.

(2) Liquid waste system designers that configure conventional treatment systems and approved proprietary advanced systems shall demonstrate competence in configuration of on-site liquid waste systems, certification by the manufacturer of approved systems proposed, and a basic understanding of the treatment and disposal process.

(3) Installers shall possess a valid, applicable New Mexico contractor's license and demonstrate competence in the installation of on-site liquid waste systems.

(a) An installer 1 shall demonstrate competence in the installation of conventional treatment and disposal systems and alternative non-dosing disposal systems.

(b) An installer 2 shall demonstrate competence in all forms of on-site liquid waste systems. An installer 2 must have at least 3 years of installation experience, 30 hours of approved coursework and certified by the manufacturer of approved systems they install.

(4) Wastewater reuse irrigation service providers shall possess a valid, applicable New Mexico contractor's license and demonstrate competence in the configuration, installation, operation, and maintenance of wastewater irrigation systems and the protection of public health.

(5) Inspectors shall demonstrate competence in the inspection of on-site liquid waste systems. Certification by the national association of waste transporters (NAWT), NSF international or a department approved program is demonstration of competence in the inspection of conventional treatment and disposal systems.

(6) Maintenance service providers (MSP) shall demonstrate competence in the operation and maintenance of on-site liquid waste systems. Persons providing service shall follow department procedures for MSP and shall be certified by the manufacturer of the systems they operate and maintain.

(7) Septage pumpers shall demonstrate familiarity with applicable regulations and demonstrate competence in locating and exposing septic tanks, measuring septic tank sludge and scum levels, the complete pumping of septic tank sludge, maintenance of pumping equipment in a sanitary condition, prevention of pathogen transmission, and preparation of an appropriate safety plan for normal operations.

(8) Manufacturers of approved advanced treatment systems shall provide training and certification for their systems at least once per year. Manufacturers may charge reasonable fees for their training and certification.

C. Limitations on scope of services:

(1) Liquid waste system designers may only configure conventional treatment systems, approved proprietary advanced treatment systems, and conventional, proprietary, and alternative disposal systems described in 20.7.3 NMAC.

(2) Installer 1 may only install conventional treatment systems and conventional and alternative disposal systems that do not involve dosing or other mechanical distribution systems.

(3) Installer 2 may install all forms of on-site liquid waste systems.

D. Expiration and renewal of certifications and establishment of fees:

(1) Certifications are valid for a period up to three (3) years and shall expire on December 31 of the third year of issuance.

(2) Renewal of certifications require completion of at least 8 hours of continuing education units per year approved by the department.

(3) The department shall establish fees for the initial application and renewal of certifications.

E. Suspension, revocation, and denials:

(1) The department may suspend or revoke a certification for cause. Failure to provide service in accordance with the certification shall be grounds for revocation of the certification.

(2) The department may deny certification if it determines that an applicant does not meet all requirements of this part or has violated any provision of these regulations.

[20.7.3.45 NMAC - N, x/x/2003]

**20.7.3.905 TECHNICAL ADVISORY COMMITTEE:** Technical product review and approval shall be in accordance with 9-7A-15 NMSA 1978.

**20.7.3.906 ADMINISTRATIVE ENFORCEMENT**

A. Any violation of these regulations is a petty misdemeanor subject to criminal penalties as authorized by NMSA 74-1-10.

B. The department may appear and prosecute any misdemeanor proceeding if the appearance is by an employee authorized by the secretary to institute or cause to be instituted an action on behalf of the department.

C. The secretary, at his discretion, may elect to pursue criminal or civil penalties or both, for any violations of these regulations.

D. Upon any violation of these regulations, the department may:

(1) issue a compliance order stating the nature of the violation requiring compliance immediately or within a specific time period and assess a civil penalty for any past or current violation or both; or,

(2) commence a civil action in district court for appropriate relief, including a temporary or permanent injunction.

E. Any penalty assessed in the compliance order for residential on-site liquid waste systems shall not exceed one hundred dollars (\$100) for each violation.

F. Any penalty assessed in the compliance order for non-residential on-site liquid waste systems shall not exceed one thousand dollars (\$1000) for each violation.

G. If a violator fails to achieve compliance within the time specified in the compliance order, the secretary shall assess civil penalties of not more than one thousand dollars (\$1000) for each noncompliance with the order.

H. A compliance order issued pursuant to this section shall become final unless, no later than thirty (30) days after the compliance order is served, the party named in the order submits a written request to the secretary for a hearing.

I. All requests for hearings shall be in accordance with 20.7.3.406 NMAC.

J. Penalties collected pursuant to violations of 20.7.3 NMAC shall be deposited in the state treasury to be credited to the general fund.

K. Any noncompliance with any provision of 20.7.3 NMAC or any permit provision shall be subject to penalties.

[20.7.3.46 NMAC - N, x/x/2003]

**20.7.3.907 AUTHORITY TO DISCONNECT SOURCE OF WATER SUPPLY:** The department may disconnect the source of water supply to a commercial or dwelling unit that is served by any on-site liquid waste system that has become a failed system and that presents an imminent hazard to public health. This authority includes authority to disconnect power utilities if necessary to disconnect the source of water supply. The department shall give notice of its actions to the unit owner and the tenants affected or as otherwise provided by the law.

[10-15-97; 20.7.3.47 NMAC - Rp 20NMAC7.3.110, x/x/2003]

**20.7.3.908 through 20.7.3.1000 [RESERVED]**

**20.7.3.[504]1001 CONSTRUCTION:** 20.7.3 NMAC shall be liberally construed to carry out its purpose.

[10/15/97; 20.7.3.501 NMAC - Rn, 20 NMAC.7.3.V.501, Recompiled 11/27/01]

**20.7.3.[502]1002 TEMPORARY PROVISIONS:** All registration certificates, permits, orders, rulings and variances issued pursuant to the regulations in effect at the time such registration certificates, permits, orders, rulings, or variances were issued shall remain in full force and effect until repealed, replaced, superseded, or amended pursuant to 20.7.3 NMAC.

[10/15/97; 20.7.3.502 NMAC - Rn, 20 NMAC.7.3.V.502, Recompiled 11/27/01]

**20.7.3.[503]1003 SEVERABILITY:** If any provision or application of 20.7.3 NMAC is held invalid, the remainder, or its application to other situations or persons, shall not be affected.

[10/15/97; 20.7.3.503 NMAC - Rn, 20 NMAC.7.3.V.503, Recompiled 11/27/01]

**20.7.3.[504]1004 REFERENCES IN OTHER REGULATIONS:** Any reference to the liquid waste disposal regulations in any other rule shall be construed as a reference to 20.7.3 NMAC.

[10/15/97; 20.7.3.504 NMAC - Rn, 20 NMAC.7.3.V.504, Recompiled 11/27/01]

**20.7.3.[505]1005 SAVINGS CLAUSE:** Repeal or supersession of prior versions of the liquid waste disposal regulations shall not affect any administrative or judicial action for the enforcement thereof.

[10/15/97; 20.7.3.505 NMAC - Rn, 20 NMAC.7.3.V.505, Recompiled 11/27/01]

**20.7.3.~~506~~1006 COLLATERAL REQUIREMENTS:** Compliance with 20.7.3 NMAC does not relieve any person from the responsibility of meeting more stringent city or county regulations or ordinances or other requirements of state or federal laws governing the treatment or disposal of liquid waste.  
[10/15/97; 20.7.3.506 NMAC - Rn, 20 NMAC.7.3.V.506, Recompiled 11/27/01]

**20.7.3.~~507~~1007 LIMITATIONS OF DEFENSE:** The existence of a valid permit for installation or modification of an on-site liquid waste system shall not constitute a defense to a violation of any section of 20.7.3 NMAC except the requirement for obtaining a permit (20.7.3.~~204~~ 401-404 NMAC).  
[10/15/97; 20.7.3.507 NMAC - Rn, 20 NMAC.7.3.V.507, Recompiled 11/27/01]

**20.7.3.~~508~~1008 to 20.7.3.~~599~~1100** [RESERVED]

HISTORY OF 20.7.3 NMAC:

Pre-NMAC History: The material in this part was derived from that previously filed with the commission of public records - state records center and archives.

EIB 73-4, Liquid Waste Disposal Regulations, filed 9/19/73.

EIB 79-7-2, Liquid Waste Disposal Regulations, filed 8/7/79.

EIB/LWDR 1, Liquid Waste Disposal Regulations, filed 10/10/85.

EIB/LWDR 2, Liquid Waste Disposal Regulations, filed 10/19/89.

History of Repealed Material: 20 NMAC 7.3, Liquid Waste Disposal (filed 10-27-95) repealed 11-30-95.

Other History:

EIB/LWDR 2, Liquid Waste Disposal Regulations (filed 12/19/89) renumbered, reformatted and replaced by 20 NMAC 7.3, Liquid Waste Disposal, effective 11/30/95.

20 NMAC 7.3, Liquid Waste Disposal (filed 10/27/95) replaced by 20 NMAC 7.3, Liquid Waste Disposal, effective 10/15/97.

20 NMAC 7.3, Liquid Waste Disposal (filed 09/08/97) renumbered, reformatted, amended and replaced by 20.7.3 NMAC, Liquid Waste Disposal, effective 4/01/04.